



**WORKHORSE**



**2005 - 2006  
SERVICE  
TRAINING  
CATALOG**

**Developing  
"World-Class"  
Service Personnel**

**Service Training Course Information**

# WORKHORSE

## SERVICE TRAINING PROGRAM

*EXCEPTIONAL TRAINING FOR ALL WORKHORSE CUSTOMERS*

### WORKHORSE'S 100,000TH CHASSIS ROLLS OFF PRODUCTION LINE

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*Workhorse's 100,000th chassis marks six years of ground breaking innovations.*

UNION CITY, IN — Workhorse Custom Chassis marked a major milestone in June, 2005 as it celebrated the 100,000th chassis to come off its production line since it began manufacturing operations in 1999.

In that time, Workhorse has become the leading manufacturer of Class A (bus-style) motor home chassis, commercial chassis, bus chassis, and walk-in step vans. According to recent data of new vehicle registrations, the top ten RV dealers in the United States ordered 79 percent of their Class A gas motor home inventory on Workhorse chassis.

Workhorse achieved this status by introducing innovations that have dramatically improved the power, performance, ride, handling, and overall appeal of new motor homes. Thanks to Workhorse, the rapidly growing RV market now has more choices than ever to offer new buyers.

#### **Workhorse Service Training Department News**

Workhorse Service Training has been busy developing several new training courses for the 2005/2006 training year. These courses are designed to cover the exciting Workhorse product line. The 2006 product lineup includes:

- The new LF72 (low floor bus chassis)
- The all new W16/W18 which replace the former the P32 motor home chassis
- Updated and refined W20/W22/W24 motor home chassis
- The all new W42 (which replaces the former P42 commercial chassis. The new W42 is available with an exciting new International® diesel engine option
- New updates to the W52 commercial chassis

With all of these new and updated chassis, product updates and training will be necessary to keep your technician up to date and your dealership in compliance with Workhorse standards.

As in the past year, Workhorse Service Training will be available in several different delivery formats.

- WOW (Workhorse On the Web) Service Training Delivery System (STDS -- Internet-based/IDL)
- Instructor-Led "Live" Classes (Available at your facility or ours. \*See details for mobile training requirements.)
- Mobile Service Training (Traveling Training Stripped Chassis)
- Pay-Per-View Classes (Internet/IDL - Foundation Courses)



## ***Change in Certified Personnel***

All authorized Workhorse service dealers are responsible for notifying their Workhorse Regional Service Manager of ANY change in their Workhorse service department staff. As per your Workhorse Policy and Procedures Manual, each authorized dealer is responsible for maintaining a minimum of one of the following service personnel on staff at ALL times:

- 1 Certified P/W Front Engine Gas Chassis Service Technician (instructor-led course applies only)
- 1 Certified Service Advisor (WOW Internet/IDL)
- 1 Certified Warranty Administrator (WOW Internet/IDL)
- 1 Certified R/RE Series Service Technician (Required for all authorized RDP dealers)
- 1 Certified LF Series Service Bus Technician (Required for all authorized bus dealers)

## ***WOW Service Training Delivery System***

Workhorse on the Web (WOW) Service Training Delivery System (STDS) brings instructor-led training via the Internet to technicians anywhere in the world. These training courses are available to all Workhorse dealers, fleets, and body builders for a nominal dealer fee.

This method of training allows everyone the opportunity to take many hours of dynamic technical training on a variety of subjects without spending a dime on travel expenses. Your personnel never leave the dealership to take advantage of this revolutionary concept in training delivery.

## ***Mentor Requirement***

Workhorse requires that each dealer designate a training “mentor” to coordinate the training program for the Internet broadcast programs. The mentor is responsible for viewing the broadcasts with the technicians, recording the program for review later, distributing the written examinations, and submitting training records to Workhorse. The mentor should be present at all broadcasts in order to answer any questions that may arise and to ensure all students are getting the most out of the training program. The training mentor is the “go to” person for the dealers service department.

## ***Master Certification Program***

Continuing in the 2005/2006 training year, Workhorse will be proud to present “Master Certification” status to any authorized technician who has attended each Workhorse training course. You must have satisfactorily completed each of the following instructor-led courses:

- W Series Chassis Course
- R/RE Series Chassis Course (required of all authorized RDP dealers)
- Advance Vibration Diagnosis and Repair
- HVAC Course
- Rear Axle & Driveline Service
- Advanced Electrical/Electronics
- LF Series Chassis Course (required of all authorized bus dealers)



Master certification grants each technician and dealership master certification recognition materials and take away items.



### ***Instructor-Led “Live” Training***

Workhorse’s “live” instructor-led training is world-class. We ensure that the training classroom is hands-on, utilizing the right diagnostic tools and equipment to diagnose and service fully operational Workhorse chassis. Our factory trained and industry experienced instructors are sensitive and understanding to students’ needs assuring the technicians get top-notch instruction every time they attend a Workhorse training course. Our instructors are ASE Certified Master Technicians who know the Workhorse product line inside out. They have attended many hours of training to ensure they are up to date on the latest service information and procedures.



Workhorse continues to lead the RV industry by providing innovative and inexpensive training solutions for today’s rapidly changing technology. We are very excited about the technology changes that are taking place and we want to keep all Workhorse technicians aware of new developments and the research we have completed to prepare for today’s new market demands. Cost to attend all Instructor-Led “Live” Training Courses remains at \$295.00 per student.

### ***Mobile Service Training (Actual Workhorse Training Chassis)***

Workhorse offers comprehensive training courses that can be conducted at YOUR location. Our training instructor(s) can bring a completely operational stripped chassis to your facility allowing your technicians to practice the hands on training they have learned in the classroom immediately. With on site training you eliminate the cost of travel to a training center and lost productivity on travel days. Certain conditions apply. Contact your Workhorse Regional Service Manager or the Workhorse Service Training Department for more details.



### ***NEW - Pay Per View Sessions - coming soon . . .***

Workhorse will be offering “Pay Per View” training sessions on the WOW Internet site. These foundation courses are intended to cover “Back to Basics” . . . Information you might have forgotten or need a refresher on. These are perfect for a new technician/apprentice just starting out in the RV industry, or for a body technician who is changing or enhancing their career path. No matter what the case is, these courses are sure to keep you fresh on the basics. Class availability/information will be released on the WOW message board.



These broadcasts cover on subjects such as:

- Base Brake Systems
- ABS Brake Systems
- Basic Electrical Systems
- Motor Vehicle Electronics
- Basic Engine Performance
- Automatic Transmission
- Manual Transmissions and Drivetrain
- Air Conditioning Systems (HVAC)

The cost for Pay Per View Sessions will be \$25.00 per viewing session hour/per student. Individual classes are expected to run between 4-12 hours.



# **SERVICE ADVISOR CERTIFICATION COURSE**

MANDATORY REQUIREMENT FOR ALL AUTHORIZED WORKHORSE DEALERS AS OF 2005. ALL WORKHORSE DEALERS MUST MAINTAIN A MINIMUM OF ONE CERTIFIED SERVICE ADVISOR ON STAFF AT ALL TIMES.

**Course Type: Internet/IDL**                      **Course Length: 10 Sessions**  
**Cost: \$295.00/Per Dealer for all 10 sessions (no limit on number of students)**

During the 2004/2005 training year, Workhorse made its Service Advisor Course mandatory for all Workhorse dealers. Again in the 2005/2006 training year we will continue to offer this course on the dealer WOW system so that each dealer may continue to satisfy their certification. Remember, if your Certified Service Advisor has left your dealership you **MUST** train and certify another Service Advisor.

With the ever increasing demand for highly-skilled Service Advisors in the RV dealership, Workhorse has developed this comprehensive training course to meet that need. Feedback from advisors that have already taken this course has been outstanding. This course is designed to give Service Advisors the tools necessary to effectively handle today's complex customer.

We know from customer response that simply finding the problem and fixing it on time is not all there is to great "customer service." We must now take time to build a relationship with the customer — going out of your way to make the customer feel comfortable, listened to, and important in your process, no matter how busy you might be.

And most important, if customers are satisfied with their vehicle and service they receive at a Workhorse dealership, it is almost a sure bet they will buy their next RV from that dealership.

## **COURSE CONTENT**

- Understanding the Complex RV Owner/Customer
- Greeting the Customer
- Scheduling Service Appointments
- Customer Handling Skills / How to Ask The Right Questions
- How To Say No (The Right Way)
- Understanding and Explaining What is a Normal Operating Characteristic
- Solutions to Handling Angry Customers
- Workhorse Warranty Responsibility
- Proper Vehicle Loading Specs/RV Knowledge
- Lemon Law Implications
- Using the WOW System
- Repair Order Write Up
- Repair Order Documentation Requirements
- Operating a Dual Repair Order System
- Mechanics of a Motor Home
- Service Department Performance Standards
- Customer Follow-up Skills



## **WARRANTY ADMINISTRATOR TRAINING**

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MANDATORY REQUIREMENT FOR ALL AUTHORIZED WORKHORSE DEALERS AS OF 2006. ALL WORKHORSE DEALERS MUST MAINTAIN A MINIMUM OF ONE CERTIFIED WARRANTY ADMINISTRATOR ON STAFF AT ALL TIMES.



**Course Type: Internet/IDL**                      **Course Length: N/A (Student-Paced)**  
**Cost: \$295.00/Per Dealer for all Sessions (no limit on number of students)**

New for the 2006 training year, Workhorse will make its Warranty Administrator Training course mandatory for all authorized Workhorse dealers. This course will be offered over the WOW Internet dealer site making it easy to view and certify your Warranty Administrator.

### **COURSE CONTENT**

- How to use WOW for correct warranty claim entry/submission
- Knowledge of correct labor operation lookup/usage
- How to avoid warranty claim rejection
- Coverage of proper documentation to validate warranty claim submission
- Understanding campaign bulletin procedures and labor hour submission
- Correct usage of Workhorse technical resources

## **ALL NEW FRONT ENGINE (W SERIES) GAS RV / CHASSIS RE-CERTIFICATION COURSE**

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### **Recertification Policy and Course**

**Course Type: Internet/IDL**                      **Course Length: 10 Sessions**  
**Cost: \$100.00 Per Student/Technician (1 or 2 Technicians) for all Sessions**  
**Cost: \$295.00 Per Dealer (3 or More Technicians) for all Sessions**

**NOTICE:** To be offered November, 2005. Watch for details/dates to be announced on the WOW message board. This Front Engine RV Chassis Re-Certification course is designed to re-certify all Workhorse technicians that have attended the P/W Front Engine Gas Chassis Course or P/W Satellite Course AFTER MARCH 2003. You must have this UPDATED course to become RE-CERTIFIED AND MAINTAIN REQUIRED WORKHORSE STANDARDS.

Workhorse technicians that attended P/W Training **BEFORE** MARCH 2003 will be required to take the NEW Instructor-Led "Live" course at a training location near you.

- Session 1 – 2006 Product Overview, Meeting Customer Expectations
- Session 2 – Electrical Systems – Using Electrical Schematics in Diagnosis
- Session 3 – Engine Electrical – Ignition, Starting & Charging Systems
- Session 4 – Actia Cluster Diagnosis – Tech 2 and Laptop Based Diagnosis
- Session 5 – Diagnosing Fuel & Emission Related Concerns
- Session 6 – Session 6 – Transmission and Transmission Control Systems Including Arens® Shifter and Transmission Grade Brake
- Session 7 – Base Brake Systems – Brembo, Bosch, & Park Brake Systems
- Session 8 – ABS Systems – MeritorWabco® & Kelsey Hayes®
- Session 9 – Motor Home Loading Procedures & Verification – Chassis Systems Including Steering & Suspension
- Session 10 – Vibration Diagnosis and Correction (NVH)



# ALL NEW “W” SERIES CHASSIS CERTIFICATION COURSE

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MANDATORY REQUIREMENT FOR ALL AUTHORIZED WORKHORSE DEALERS - 2005/2006. ALL WORKHORSE DEALERS MUST MAINTAIN A MINIMUM OF ONE CERTIFIED SERVICE TECHNICIAN ON STAFF AT ALL TIMES.

**Course Type: Instructor-Led, Live**  
**Cost: \$295.00 Per Student**

**Course Length: 5 Days**

This year we are debuting an all new training course covering the these chassis:

- W16/W18 Series Motor Home
- W20/W22/W24 Series Motor Home
- W42 Series Commercial
- W52 Series Commercial

This dynamic course is brand new from the ground up with special emphasis on diagnosis and repair of Workhorse exclusive systems. We have added special coverage of the new format wiring diagrams, new components for previous chassis models, and will continue to cover the P Series in this course until completely phased out.

The training requirements for technician certification have been enhanced for 2006. If a service technician(s) attended the P/W Front Engine Gas Chassis instructor-led, or the P/W satellite course prior to March, 2003 they will be required to attend the W Series Chassis “live” course in 2005/2006. If a technician(s) attended the P/W instructor-led, or the P/W satellite course after March, 2003 your technician will be offered an “update” course via the WOW dealer Internet site. This update course must be viewed and the final exam must be passed in order to maintain your Workhorse certification for the 2005/2006 training year. Keep in mind even if a certified technician/advisor has been on staff at one time and they have moved on, each authorized dealer must certify a new technician/advisor.

More intensive than ever, this new W Series Chassis training course is designed to prepare your technician(s) to deliver top-notch level service work on all Workhorse gas/diesel engine powered motor homes and commercial vehicles.

## COURSE CONTENT

- Complete Coverage of the all the new W Series chassis features and systems while continuing to cover the former P Series chassis
- Comprehensive coverage of all 2006 Fuel System, Emission, and Driveability Revisions
- The Latest Diagnostic and Repair Information on the Powertrain Control System
- Engine Electrical and Electronic Systems Diagnosis and Repair
- Powertrain Strategy-Based Diagnosis Using the Tech 2 and Service Manual Procedures
- Symptom-to-System-to-Cause Diagnostic Procedures When no Diagnostic Trouble Codes are Present
- Automatic Transmission Operation, Diagnosis, and Repair
  - Hydra-Matic® 4L85E/4L80E
  - Allison™ 1000 MH & 2100 MH Series



### **(W Series Chassis Certification Course - continued)**

- Arens® Electronic Shift Control System
- Transmission Grade Braking System Diagnosis and Repair
- Electronic Transmission Control Systems
- Electrical System Diagnosis and Repair
  - In-depth Look into Workhorse Electrical and Electronic Systems
  - Detailed Explanation of New Wiring Diagram Format
  - Actia® Instrument Cluster Diagnosis and Repair
- Braking Systems
  - Detailed Diagnostic Procedures for the J71 & J72 Park Brake Systems
  - Brand New for 2006 - Brembo® Base Brake System
  - Meritor® Quadraulic Brake System Operation
  - Meritor®/Wabco® ABS (all 2006 motor home chassis) Operation, Diagnosis and Repair Utilizing ToolBox® Laptop-Based Software
  - Kelsey Hayes® Operation, Diagnosis and Repair using the Tech 2 scan tool
- Multiple Activities Diagnosing Real-World Concerns Using DMM's, the Tech 2, Laptop Computers, and the Latest Service Publications
- Hands-On Diagnostic Practice in Repairing System Faults on an Operating Workhorse Chassis
- Warranty Responsibility Awareness
  - Which Components are Covered by Workhorse and Which are the Responsibility of the Body Builder
  - What NOT to do When Performing Warranty Repair
- Proper Weight Distribution Verification Techniques
  - 4-Corner Weight Verification
  - Loading / Balancing
  - Center of Gravity
  - Overhang Verification
  - Proper Dinky Towing Procedures
- Understanding and Utilizing WOW — Your Technical Resource
- Using and Understanding VIN Card Information



## **R/RE SERIES (RDP) CHASSIS CERTIFICATION COURSE**

MANDATORY REQUIREMENT FOR ALL AUTHORIZED WORKHORSE RDP DEALERS. ALL WORKHORSE RDP DEALERS MUST MAINTAIN A MINIMUM OF ONE CERTIFIED RDP SERVICE TECHNICIAN ON STAFF AT ALL TIMES.

**Course Type: Instructor-Led, Live**

**Course Length: 4 Days**

**Cost: \$295.00 Per Student**

This course supports your technical training needs on all Workhorse systems of the new Rear Diesel Pusher chassis.

### **COURSE CONTENT**

- Complete Chassis Overview and Familiarization
- Chassis Electrical System Diagnosis and Repair
  - Detailed Explanation of New Wiring Diagram Format



## **(R/RE Series Chassis Certification Course - continued)**

- SmartWheel® Control System Diagnostics
- Actia® Instrument Cluster Diagnosis and Repair
- Air Brake System Operation, Diagnosis, and Repair Procedures
  - Automatic Slack Adjusters
  - Air Dryer Diagnosis and Overhaul
  - Parking Brake System
  - Warning System
  - MeritorWabco® Air Brake Antilock System (ABS) Diagnosis
- Front and Rear Suspension
  - Air Suspension Controls
  - Steering System Service
- Cummins® ISC/ISL Engines
  - Familiarization and Overview of all Engine Systems
  - Cruise Control Operation and Diagnosis
  - Cooling System Service — Including the Hydraulic Drive Cooling Fan
  - Service and Maintenance Information
  - Technicians Learn how to Determine if the Concern is a Cummins® or a Workhorse Related Area of Responsibility
- Allison™ 3000 MH Series Transmission Maintenance/Overview and Diagnosis
  - Operational Overview and Required Maintenance Procedures
  - Electronic Diagnosis and Repair
  - Technicians Learn how to Determine if the Concern is an Allison™ or Workhorse Area of Responsibility
- Understanding and Utilizing WOW — Your Technical Resource



## **ADVANCED VIBRATION DIAGNOSIS AND REPAIR**

**Course Type: Instructor-Led, Live**  
**Cost: \$295.00 Per Student**

**Course Length: 2 Days**

The intent of this course is to provide the technician with a systematic approach to diagnosing and correcting vibration concerns. This systematic approach, along with the specific on-vehicle procedures used to troubleshoot vibration related concerns, helps to isolate/verify concerns to certain component groups.

### **COURSE CONTENT**

- Workhorse Chassis Specific Diagnosis
  - Motor Home
  - Commercial
  - Bus
- Use of the Electronic Vibration Analyzer (EVA) to Pinpoint Chassis Vibration Sources
- Calculate Vibration Frequencies to Pinpoint the Source of the Vibration
- Identify the Steps (Road Test Checks) Necessary to Isolate a Vibration Concern
- Driveline Diagnosis and Repair
- Identify, Diagnose, and Repair Actual Vibration Concerns on an operating Workhorse chassis



## REAR AXLE & DRIVELINE SERVICE

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**Course Type:** *Instructor-Led, Live*  
**Cost:** *\$295.00 Per Student*

**Course Length:** *2 Days*

Course focuses on diagnosis of drive axle related concerns as well as addressing driveline concerns in all Workhorse chassis applications.

### COURSE CONTENT

- Drive Axle Identification
- Diagnosis and Repair of Axle Noise
- Determining Correct Gear Contact Patterns
- Gear Set Replacement/Setup and Axle Bearing Service/Inspection
- Measuring and Adjusting Pinion Depth
- Determining the Correct Bearing Preload
- Universal Joint and Slip Yoke Service
- Measuring and Correcting Driveline Angles
- Correcting Driveline Runout and Balance Concerns
- Usage/Understanding of Latest Driveline Service Tools

## ADVANCED ELECTRICAL/ELECTRONIC DIAGNOSIS

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**Course Type:** *Instructor-Led, Live*  
**Cost:** *\$295.00 Per Student*

**Course Length:** *4 Days*

In-depth diagnostic and repair course building on basic principles.

### COURSE CONTENT

- Comprehensive Use/Understanding of the Tech 2 Diagnostic Scan Tool
- Advanced Use/Understanding of the Digital Multimeter (DMM)
  - *Hot Wire Sensors*
  - *Piezoelectric Devices*
  - *Input Signal Processing*
- Theory, Operation, Diagnosis, and Repair of Output Control Devices
  - *Transistor Switching*
  - *Direct Analog Voltage Output Control*
  - *Pulse Width Modulation (PWM)*
  - *Transistor Controlled Relays*
- On-Board Diagnostics I & II (OBD I & OBD II) on the Workhorse chassis

## FLEET/COMMERCIAL PRODUCT TRAINING

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**Course Type:** *Instructor-Led, Live*

**Course Length:** *(Depending on Courses Selected)*

**Cost:** *\$295.00 Per Student*

Workhorse is committed in providing training for any Fleet or Commercial Customer. We can tailor a training class that fits your specific needs.

**NOTICE:** *Fleet/Commercial technicians may attend any of the listed scheduled courses. Please contact your Workhorse Regional Service Manager or the Workhorse Service Training Department for more information.*



**(Fleet/Commercial Product Training - continued)**

**COURSE CONTENT**

- Electrical and Electronic Systems
- Base Brake System
- Antilock Brake Systems
- Engine Systems & Engine Repair
- Electronic Engine Controls
- Transmission Systems Diagnosis and Repair
- Rear Axle and Propeller Shaft
- HVAC Systems
- Suspension/Steering
- Comprehensive Preventative Maintenance Schedules



**4.5L INTERNATIONAL® DIESEL ENGINE**

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**Course Type: Instructor-Led, Live**

**Course Length: 2 Days**

**Cost: \$295.00 Per Student**

This course covers the all-new International® 4.5L V6 twin turbo diesel engine. Emphasis is on diagnosis and repair of the fuel injection, EGR, and emission control systems.



**COURSE CONTENT**

- Engine Identification
- Specific Maintenance Procedures
- Engine Mechanical, Cooling, and Lubrication Systems
- Fuel Injection System Diagnosis and Service
- Electronic Engine Control System
- Glow Plug/Intake Air Heater System Service
- Emission Control Systems
  - Cooled EGR System
  - Catalytic Converter
- Air Induction and Exhaust Systems



**6.6L DURAMAX® DIESEL ENGINE**

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**Course Type: Instructor-Led, Live**

**Course Length: 3 Days**

**Cost: \$295.00 Per Student**

This is a comprehensive training course covering the 6.6L Duramax® Diesel Engine installed in the LF series FWD bus platform.

**NOTICE:** *The information presented is also applicable to other Duramax equipped vehicles.*

**COURSE CONTENT**

- Engine Mechanical and Lubrication Systems
- Cooling System
- Air Induction and Exhaust Systems
- Variable Nozzle Turbocharger
- Cooled EGR System
- Catalytic Converter



## 6.5L DIESEL TRAINING

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**Course Type: Instructor-Led, Live**  
**Cost: \$295.00 Per Student**

**Course Length: 2 Days**

This course covers the 6.5L V8 diesel engine(s), both normally aspirated and turbocharged. Emphasis is on diagnosis and repair of the fuel injection and emission control systems.

### COURSE CONTENT

- Engine Identification
- Maintenance Procedures
- Engine Mechanical Systems
- Fuel Injection System Diagnosis and Service
- Electronic Controls
- Mechanical Controls
- Glow Plug System Service
- Emission Control Systems
- Air Induction and Exhaust Systems
- Cooling System
- Lubrication System

## LF SERIES BUS CHASSIS CERTIFICATION

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MANDATORY REQUIREMENT FOR ALL AUTHORIZED WORKHORSE LF SERIES BUS DEALERS. ALL WORKHORSE AUTHORIZED BUS DEALERS MUST MAINTAIN A MINIMUM OF ONE CERTIFIED LF SERIES (BUS) SERVICE TECHNICIAN ON STAFF AT ALL TIMES.

**Course Type: Instructor-Led, Live**  
**Cost: \$295.00 Per Student**

**Course Length: 4 Days**

This course covers the all new LF series (FWD) bus chassis. Many of the components are brand new on this revolutionary Workhorse Chassis. Therefore, this class is a “must attend” for all authorized dealers servicing this the new chassis.

### COURSE CONTENT

- Comprehensive Chassis Systems Overview
- Chassis Electrical System
- Duramax® Diesel Engine
- Allison® 1000 Series Transmission and Control System
- Cushman® Transfer Case Service
- Carrero® Front Drive Axle Operation
- Intelliride® Air Ride Suspension System Diagnosis and Repair
- Base Brake System
- WABCO HPB Integrated Braking System
- Understanding and Utilizing WOW — Your Technical Resource



# **AUTO TRANSMISSION DIAGNOSIS & REPAIR**

**Course Type: Instructor-Led, Live**

**Course Length: 2 Days**

**Cost: \$295.00 Per Student**

Our Automatic Transmission Diagnosis & Repair course covers electrical and mechanical diagnosis of the Hydra-Matic® 4L85E/4L80E and the Allison™ transmissions used in front-engine Workhorse chassis. Focus is on diagnosis and repair of the electrical/electronic systems and light transmission repair.



## **COURSE CONTENT**

- Understanding the Electronically Controlled Automatic Transmission
- Diagnosis Utilizing the Tech 2 and/or Laptop Computer
- Use of Hydraulic Pressure Tests in Diagnosis
- Internal Electronic Component Diagnosis and Replacement
- Transmission Fluid Condition Analysis
- Lock-up Torque Converter Fundamentals/Diagnosis
- Understanding Powerflow and Hydraulic Circuits
- Road Test Procedures



# **HVAC TRAINING COURSE (A/C SYSTEMS)**

**Course Type: Instructor-Led, Live**

**Course Length: 2 Days**

**Cost: \$295.00 Per Student**

This course covers all aspects of diagnosing and repairing the air conditioning and heating systems on all Workhorse chassis.

## **COURSE CONTENT**

- AC Theory Review
- Workhorse Component Responsibility
- Refrigerant Recovery and Charging Procedures (R134a)
- Electrical and Electronic Control System Diagnosis and Repair
- Installation of Auxiliary Condenser Kit
- Heating System Controls
- Refrigerant Leak Detection
- Component Inspection
- The Latest & Greatest HVAC Tools & Equipment



# **ADDITIONAL COURSES AVAILABLE**

(PLEASE CONTACT YOUR WORKHORSE REGIONAL SERVICE MANAGER OR THE WORKHORSE SERVICE TRAINING DEPARTMENT FOR ADDITIONAL INFORMATION.)

## **TECH 2 ORIENTATION AND OPERATION**

Comprehensive overview/usage of the Tech 2 scan tool. Students get the opportunity of diagnosing real-world issues on a “bugged” chassis using the Tech 2 scan tool. Our instructors provide a Tech 2 for the training. This allows fleet/dealer technicians to evaluate the advantages during the training course. This course can be conducted at our designated facilities or at your fleet/dealer maintenance facility (some restrictions may apply).



# WORKHORSE PREVENTATIVE MAINTENANCE



Step by step overview of all Workhorse maintenance procedures. Students get hands-on instruction covering proper maintenance techniques. Instructors routinely offer other technical tips and tricks of the trade during these sessions conducted at our designated facilities or at your fleet maintenance facility/ dealership (some restrictions may apply).

## TRAINING AT A LOCATION NEAR YOU !!

### FOUR KEY TRAINING SITES — EACH WITH A CERTIFIED WORKHORSE INSTRUCTOR.

To minimize time away from your dealership and reduce your costs, we're conducting training sessions at four key locations across the U.S. You are sure to find a Workhorse training site near you. Our key training sites are:

#### **NORTH AND MIDWEST REGION**

Workhorse Training Center  
1407 Allen Dr  
Suite H  
Troy, MI 48083  
Phone: (248) 616-9080

#### **EAST REGION**

Baltimore Community College  
800 S. Rolling Rd.  
Baltimore, MD 21228  
Phone: (410) 455-6050

#### **SOUTH REGION**

Travis Technical Center  
3225 Winter Lake Rd.  
Lakeland, FL 33803  
Phone: (863) 499-2888

#### **WEST REGION**

Valley College  
701 S. Mt. Vernon Ave.  
San Bernardino, CA 92410  
Phone: (909) 382-4079

**NOTICE:** *All maps and directions for each training center are available on the WOW message board.*



## \*MOBILE TRAINING REQUIREMENTS

In order facilitate a mobile training class at your facility, you will need a quiet area for classroom use large enough to accommodate a minimum of 10 students, a white board, internet connection, access to tools, and a designated shop area for our stripped chassis/materials. Please contact your Workhorse Regional Service Manager or the Workhorse Service Training Department for more details.



## HOW TO REGISTER.

### ***To schedule a technician:***

1. Choose from the available dates that follow and simply photocopy the "Sign up Now" page.
2. Complete one sheet for each technician attending.

**NOTICE:** *Each form must be filled out completely and neatly. The certificate of completion is printed from the information supplied on the registration form. Please check to ensure all registrants' names are spelled correctly and are legible.*



3. Fax the completed page to Chris Ekin at Workhorse Service Training (248) 588-6978.
4. All payments must be received by Workhorse no later than 5 business days prior to the start of each class to ensure a seat in these dynamic courses.

**NOTICE:** *Please remit your payment immediately upon enrollment. Make check payable to: Workhorse Custom Chassis and mail to: Workhorse Custom Chassis, Attn: Mr. Chris Ekin, Manager of Training & Service Publications, 850 Stephenson Hwy, Suite 510, Troy, MI 48083. If you have any questions regarding this process, please contact Chris at: (877)-246-7731.*



Full information including directions to training locations, accommodations, and restaurants will be forwarded to you by return fax/email. Please include your fax number/email address on the enrollment page when registering.

**NOTICE:** *Please keep in mind that we must have a minimum of 10 students per class to consider it a "FULL" class. Workhorse reserves the right to reschedule or cancel classes at any time.*



**COMING SOON: Online enrollment and payment capability. Please monitor the WOW message board for coming details.**

## TRAINING AT YOUR LOCATION

Whether you are a Workhorse RV Dealer, Fleet Dealer, or Commercial Dealer, Workhorse offers training at your local facility eliminating travel planning headaches and expenses. Certain conditions may apply. Contact your Workhorse Regional Service Manager or the Workhorse Service Training Department today for more information. Be sure to ask about our Mobile Service Training Program. We bring training "on the road," complete with a Workhorse chassis and all right to your door. It is an exciting way to present extensive "hands-on" training.



# INSTRUCTOR-LED "LIVE" TRAINING SCHEDULE FALL 2005 THROUGH SUMMER 2006

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LOCATED AT A WORKHORSE TRAINING CENTER NEAR YOU!!

## October 2005

Baltimore, MD	Oct. 3 - 7, 2005	5-Day W Series Front Engine Gas Chassis
Troy, MI	Oct. 3 - 7, 2005	5-Day W Series Front Engine Gas Chassis
San Bernardino, CA	Oct. 3 - 7, 2005	5-Day W Series Front Engine Gas Chassis
Troy, MI	Oct. 11 - 14, 2005	2-Day Advanced Vibration Diagnosis 2-Day HVAC (A/C Systems)
Baltimore, MD	Oct. 25 - 28, 2005	2-Day Advanced Vibration Diagnosis 2-Day HVAC (A/C Systems)

## November 2005

Troy, MI	Nov. 7 - 11, 2005	4-Day R/RE Series (Rear Diesel Pusher)
San Bernardino, CA	Nov. 8 - 11, 2005	2-Day Advanced Vibration Diagnosis 2-Day HVAC (A/C Systems)
San Bernardino, CA	Nov. 14 - 17, 2005	4-Day Advanced Electrical/Electronics
Troy, MI	Nov. 15 - 18, 2005	4-Day Advanced Electrical/Electronic
Baltimore, MD	Nov. 15 - 18, 2005	4-Day Advanced Electrical/Electronic

## December 2005

Troy, MI	Nov. 28 - Dec. 2, 2005	5-Day W Series Front Engine Gas Chassis
Baltimore, MD	Nov. 28 - Dec. 2, 2005	5-Day W Series Front Engine Gas Chassis
San Bernardino, CA	Nov. 28 - Dec. 2, 2005	5-Day W Series Front Engine Gas Chassis
Troy, MI	Dec. 6 - 9, 2005	4-Day R/RE Series (Rear Diesel Pusher)

## January 2006

Troy, MI	Jan. 10 - 13, 2006	2-Day Advanced Vibration Diagnosis, 2-Day Rear Axle & Driveline Service
Troy, MI	Jan. 16 - 19, 2006	4-Day Advanced Electrical/Electronic
Baltimore, MD	Jan. 10 - 13, 2006	2-Day Advanced Vibration Diagnosis, 2-Day Rear Axle & Driveline Service
Baltimore, MD	Jan. 16 - 19, 2006	4-Day Advanced Electrical/Electronic
San Bernardino, CA	Jan. 10 - 13, 2006	2-Day Advanced Vibration Diagnosis, 2-Day Rear Axle & Driveline Service
San Bernardino, CA	Jan. 16 - 19, 2006	4-Day Advanced Electrical/Electronic
Troy, MI	Jan 24 - 27, 2006	4-Day R/RE Series (Rear Diesel Pusher)

## February 2006

San Bernardino, CA	Feb. 6 - 10, 2006	5-Day W Series Front Engine Gas Chassis
Baltimore, MD	Feb. 13 - 17, 2006	5-Day W Series Front Engine Gas Chassis
Troy, MI	Feb. 20 - 24, 2006	5-Day W Series Front Engine Gas Chassis

## March 2006

Baltimore, MD	March 7 - 10, 2006	4-Day Advanced Electrical/Electronics
Baltimore, MD	March 13 - 17, 2006	5-Day W Series Front Engine Gas Chassis
Troy, MI	March 7 - 10, 2006	2-Day Advanced Vibration Diagnosis 2-Day HVAC (A/C Systems)
Troy, MI	March 13 - 17, 2006	5-Day W Series Front Engine Gas Chassis
San Bernardino, CA	March 7 - 10, 2006	2-Day Advanced Vibration Diagnosis 2-Day HVAC (A/C Systems)
San Bernardino, CA	March 13 - 17, 2006	5-Day W Series Front Engine Gas Chassis

## April 2006

San Bernardino, CA	April 10 - 14, 2006	5-Day W Series Front Engine Gas Chassis
Troy, MI	April 17 - 20, 2006	4-Day R/RE Series (Rear Diesel Pusher)
Troy, MI	April 24 - 28, 2006	5-Day W Series Front Engine Gas Chassis

## May 2006

Baltimore, MD	May 2 - 5, 2006	4-Day Advanced Electrical/Electronics
Lakeland, FL	May 8 - 12, 2006	5-Day W Series Front Engine Gas Chassis
Lakeland, FL	May 15 - 18, 2006	2-Day Advanced Vibration Diagnosis 2-Day HVAC (A/C Systems)

## June 2006

Troy, MI	June 6 - 9, 2006	4-Day R/RE Series (Rear Diesel Pusher)
Troy, MI	June 12 - 16, 2006	5-Day W Series Front Engine Gas Chassis
Lakeland, FL	June 6 - 9, 2006	4-Day Advanced Electrical/Electronics
Lakeland, FL	June 12 - 16, 2006	5-Day W Series Front Engine Gas Chassis
Lakeland, FL	June 19 - 22, 2006	2-Day Advanced Vibration Diagnosis, 2-Day Rear Axle & Driveline Service

## July 2006

Lakeland, FL	July 10 - 14, 2006	5-Day W Series Front Engine Gas Chassis
Lakeland, FL	July 17 - 20, 2006	4-Day Advanced Electrical/Electronics
Troy, MI	July 24 - 28, 2006	5-Day W Series Front Engine Gas Chassis

## August 2006

Lakeland, FL	August 7 - 11, 2006	5-Day W Series Front Engine Gas Chassis
Troy, MI	August 14 - 18, 2006	5-Day W Series Front Engine Gas Chassis

## Certification and Take-Away Items

At the end of each course, students are given a written, pass/fail proficiency exam, and will receive a framed certificate of completion.



**NOTICE:** *Certificates will be printed from how the names appear on the enclosed sign up form. Please spell all names correctly and neatly!!*

Students also receive Workhorse logo patches, course chevrons, and a stylish Workhorse cap. Reference books and a CD-ROM copy of the Workhorse Service Publications (all model years) are also provided to the students and are theirs to keep at the conclusion of the course.

Those successfully completing the Service Advisor Certification Course will be receiving attractive take-away items at the completion of the course.

Those successfully completing the Warranty Administration Course will also receive attractive take-away items at the completion of the course.

## Time and Money

All Instructor-Led "Live" Courses run 8 AM to 5 PM with one hour for lunch.

Cost is \$295.00 per student/per class and can be attended at any of our Workhorse training facilities.

**Notice:** Workhorse is **not** responsible for any travel, meal, lodging, or rental vehicle expenses.

All Service Advisor Internet Courses can be taken at your convenience 24/7 each week that the training session is released. All you need is access to the Workhorse dealer WOW site.

Cost is \$295.00 per Dealer, regardless how many students view the sessions.

All IDL-based training (WOW Internet Training) can be taken at your convenience. Again, access to the Workhorse WOW site is a must.

Cost is \$295.00 per Dealer, regardless how many students view the sessions.

All Pay Per View Courses are Internet-based and can be taken at your convenience. These courses are offered on the Workhorse WOW site as well.

Cost is \$25.00 Per Viewing Hour / Per Student.



## Cancellation Policy

Workhorse reserves the right to enforce a cancellation policy regarding student attendance at instructor led live training classes (all locations). Workhorse **must** receive notification of cancellation a **minimum** of 10 (ten) business days prior to the start of the selected class date without penalty. Cancellation notice **must** be communicated by calling the Workhorse Service Training Department (877) 246-7731, Mr. Chris Ekin, or by email to [cekin@workhorse.com](mailto:cekin@workhorse.com). These are the only two methods of student cancellation Workhorse will acknowledge.

Penalty will include a non-refund of the \$295.00 per student course fee if a class is cancelled with less than the 10 (ten) business days notice (unless class has been cancelled by Workhorse directly). Each dealer will be responsible for insuring payment for each selected class has been made. **Payment is required** to be made no later than 5 business days prior to the start of each class.

**NOTICE:** *If you have any questions in regards to the Workhorse training requirements/standards please refer to your Workhorse Policy & Procedures Manual.*



