



Custom Built

TRAINING AIDS

2025

SERVICE TRAINING AIDS

**Freightliner®, Western Star®, and Detroit Diesel™
Training Simulation Equipment for Classroom Environments**

DAIMLER TRUCK
North America



TA-VEH-3000 - CEEA+ Vehicle Simulator



Overview:

This advanced training simulator is engineered to deliver hands-on learning of the CEEA+ vehicle electronic architecture in a vocationally rich, brand-neutral format. Modeled on the proven 114 SD Plus vocational chassis, it offers a comprehensive, real-world training experience without being model-specific.

Key Features:

- **CEEA+ Architecture Focus**

Designed to teach the latest Common Electrical/Electronic Architecture Plus (CEEA+) system, including diagnostics, troubleshooting, and system integration.

- **Vocational Versatility**

Incorporates vocational features such as PTO controls, air systems, and multiplexed lighting to simulate real-world vocational truck applications.

- **Brand-Neutral Design**

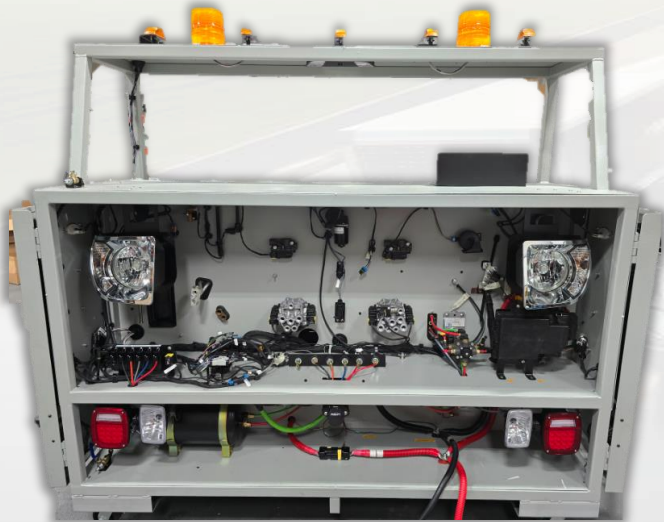
While based on the 114 SD Plus platform, the simulator is intentionally non-branded to support a wide range of training environments and applications.

- **Fully Functional Electrical Systems**

Includes live circuits, exposed wiring, and for clear visualization and hands-on interaction.

- **Modular and Mobile**

Built on a heavy-duty, mobile platform for easy integration into classroom or shop environments.



TA-VEH-2330 – Dual Air Brake System Simulator

Overview:

This comprehensive simulator replicates the full functionality of a tractor and trailer dual air brake system, providing hands-on training in air brake diagnostics, operation, and maintenance. Ideal for classroom and shop environments, it enables students to interact with real components in a safe, controlled setting.

Key Features:

•Complete Dual Air Brake System

Includes fully functioning supply, primary, secondary, and parking brake systems—minus the air compressor—for realistic training scenarios.

•Dashboard Integration

Features working dashboard air gauges for monitoring system pressure and performance.

•Trailer Connectivity

Equipped with trailer glad hands and a trailer system featuring WABCO ABS for full tractor-trailer interaction.

•Quick Connect Fittings

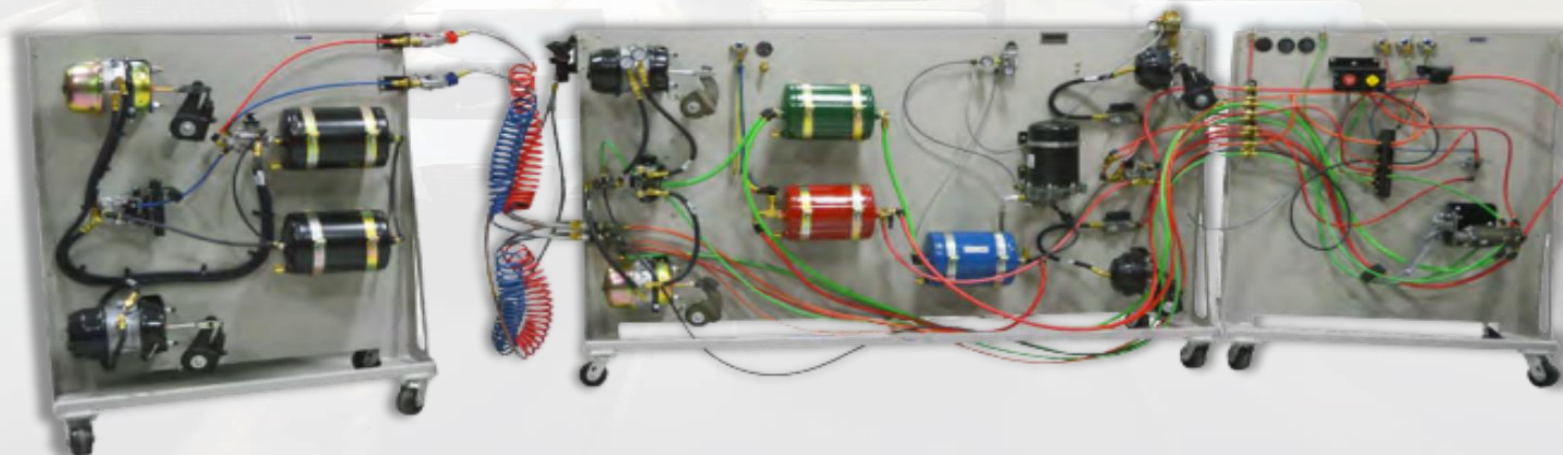
Airlines include quick connect fittings for easy setup and reconfiguration during training exercises.

•Functional Brake Components

Includes working brake canisters, air drier, and valves for easy visualization and explanation

•Safe and Accessible Design

Built for educational use, allowing students to safely explore air brake mechanics and troubleshooting techniques.



TA-VEH-2340 – Dual Clutch Simulator

Overview:

The TA-VEH-2340 Dual Clutch Simulator is a hands-on training tool designed to demonstrate the operation, service, and adjustment of heavy-duty clutch systems. It supports instruction on both hydraulic and mechanical clutch types, making it ideal for comprehensive drivetrain training in classroom or shop environments.

Key Features:

- Dual Clutch Demonstration**

Includes both Eaton Solo Advantage® hydraulic clutch and Easy-Pedal Advantage® mechanical clutch for side-by-side comparison and instruction.

- Realistic Service Procedures**

Enables demonstration of DD15 rear seal installation, flywheel timing, and proper parts installation techniques.

- Clutch Adjustment Training**

Supports full instruction on clutch assessment and adjustment procedures, including use of reset and travel tools.

- Three Piece Tool Kit Included (and each available separately)**

Comes with clutch adjustment tools to support hands-on learning and accurate service replication.



TA-VEH-2360 – Solo Advantage Clutch Reset Tool



TA-VEH-2370 – Release Bearing Travel Tool



TA-VEH-2380 – Release Yoke Free Travel Tool

TA-VEH-2350 – Hydraulic Clutch Jack

Overview:

The TA-VEH-2350 Hydraulic Clutch Jack is a heavy-duty, floor-type lifting tool designed to safely remove, install, and transport large clutches and flywheels in training and service environments. It enhances safety and efficiency during drivetrain service instruction.

Key Features:

- Heavy-Duty Capacity**

Rated for 300 lbs., ideal for handling 14" and 15-1/2" heavy-duty clutches and flywheels.

- Floor-Type Design**

Stable and maneuverable base allows for easy positioning and transport in the lowered position.

- Spline Shaft Compatibility**

Equipped with a 1-3/4" diameter spline shaft for use with Eaton clutches on DTNA clutch stands.

- Training-Ready Tool**

Supports hands-on instruction in clutch removal and installation procedures, enhancing student confidence and safety.



TA-VEH-2400 – Drive Line Simulator Kit

Overview:

The TA-VEH-2400 Drive Line Simulator Kit is a portable, hands-on training tool designed to demonstrate the principles of driveline dynamics, alignment, and vibration diagnostics. It enables students to visualize and interact with real-world driveline behavior in a safe, classroom-friendly format.

Key Features:

•Dynamic Driveline Demonstration

Simulates non-uniform velocity, driveline angle effects, vibration, and wear—ideal for understanding real-world driveline behavior.

•Interactive Learning Tools

Includes digital angle meters, shims for angle customization, and a second driveline attachment for expanded demonstrations.

•Visual and Audible Indicators

Demonstrates phasing issues, U-joint behavior, and misalignment through clear visual and sound cues.

•Portable and Organized

Comes in a custom-built case for easy transport, storage, and classroom setup.

•Troubleshooting Practice

Supports instruction in identifying and correcting driveline issues, preparing students for real-world diagnostics.

•Ideal for Drivetrain Courses

A perfect complement to transmission and axle training, reinforcing key concepts in vehicle dynamics and maintenance.



Height Adjustable Dual Brake Axle Stand

Overview:

The Height Adjustable Dual Brake Axle Stand is a versatile, heavy-duty training tool designed to simulate real-world brake service conditions. With adjustable height and multiple brake configurations, it enables students to perform complete brake jobs and steering system maintenance in a safe, controlled environment.

Key Features:

- Ergonomic Height Adjustment**

Adjustable from 24" to 31.5" to accommodate various working positions, reducing strain and improving comfort during hands-on training.

- Hands-On Brake Training**

Supports complete brake jobs, wheel seal installations, and wheel bearing adjustments.

- Steering System Instruction**

Enables kingpin and tie rod end removal and replacement (R/R), expanding its use beyond brake training.

- Air Brake Simulation**

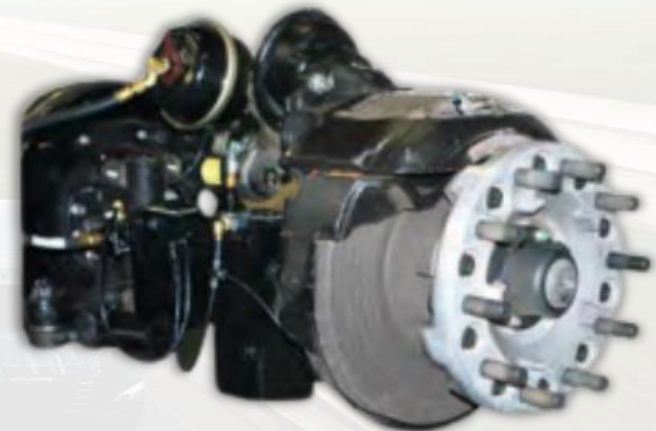
Connects to a 90 psi shop air system to simulate service brake applications and slack adjuster operation.



TA-VEH-2430 – Single Drum Brake End



TA-VEH-2410 – Dual Brake Stand Only



TA-VEH-2420 – Single Disc Brake End

Brake Drum Handler & Front Axle Adapter

Overview:

This equipment pairing is designed to support instruction in the safe handling and removal of heavy-duty brake components. The TA-VEH-2440 Brake Drum Handler and TA-VEH-2450 Front Axle Adapter are built to work together with DTNA's Height Adjustable Brake Stand, enhancing flexibility and safety in brake system training.

Key Features:

•Brake Drum Handler (TA-VEH-2440)

Designed for removing, installing, and transporting outboard-mounted brake drums and inboard-mounted drums with disc wheel hubs. Compatible with the Height Adjustable Brake Stand (TA-VEH-2410) when used with the Front Axle Adapter.



•Front Axle Adapter (TA-VEH-2450)

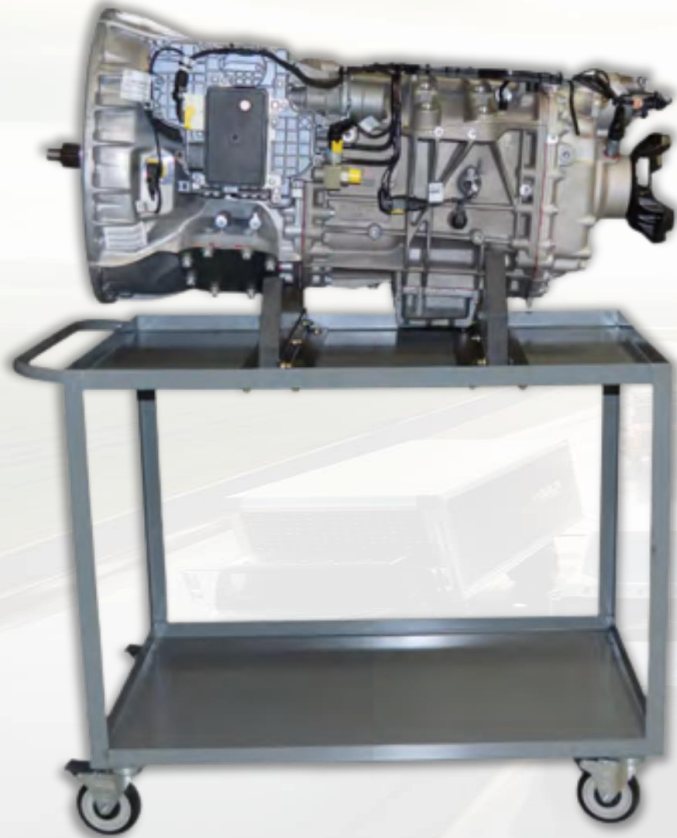
Custom adapter that enables the brake drum handler to be used with front axle hub disc or drum brakes. Compatible with dual brake stands.



TA-VEH-2415 – DT12 Transmission

Overview:

The TA-VEH-2415 DT12 Transmission Training Kit provides a hands-on platform for instruction in Automated Manual Transmission (AMT) systems. Featuring the DT12 C-Box 2020 transmission mounted on a heavy-duty cart, this kit is ideal for classroom or shop-based teardown and demonstration activities.



Key Features:

- DT12 C-Box 2020 Transmission**

Includes a full DT12 AMT unit for instructional use in efficiency, durability, and drivetrain technology.

- Heavy-Duty Cart**

Mounted on a robust cart for mobility and stability during classroom demonstrations and service training.

- Ideal for Teardown and Demonstration**

Supports instruction in internal component identification, assembly/disassembly procedures, and drivetrain system function.

TA-VEH-2460 – Battery Powered HVAC System

Overview:

The TA-VEH-2460 is a complete Battery Powered HVAC System (BPHS) training unit, designed to support instruction in electric climate control systems. Mounted on a heavy-duty cart and equipped with a live controller, this unit allows students to observe, diagnose, and interact with HVAC components in a safe and accessible format.

Key Features:

- Fully Operational BPHS Unit**

Includes a complete, running battery-powered HVAC system for hands-on training and diagnostics.

- Heavy-Duty Mobile Cart**

Mounted on a durable cart for easy transport and positioning in classroom or shop environments.

- Live Diagnostic Capability**

Allows students to identify and access system components, monitor refrigerant flow, and observe system behavior during operation.

- Visual Refrigerant Monitoring**

Equipped with sight glasses and restriction valves to display refrigerant state during demonstrations.

- Battery Not Included**

Allows for flexible integration with standard batteries or existing power sources.



TA-ENG-1200 – Gen 5 DD15 Engine w/ GATS 2.0 & Interface Board

Overview:

The TA-ENG-1200 is a fully functional, running Detroit Gen 5 DD15 engine training platform, designed to support instruction in engine operation, diagnostics, and emissions systems. Equipped with the Gen 5 (GATS 2.0) aftertreatment system, this unit provides a complete solution for hands-on learning in modern diesel engine technologies.

Key Features:

- Fully Operational Gen 5 DD15 Engine**

Includes all components required to start, run, regenerate, and monitor engine performance.

- Includes Aftertreatment System**

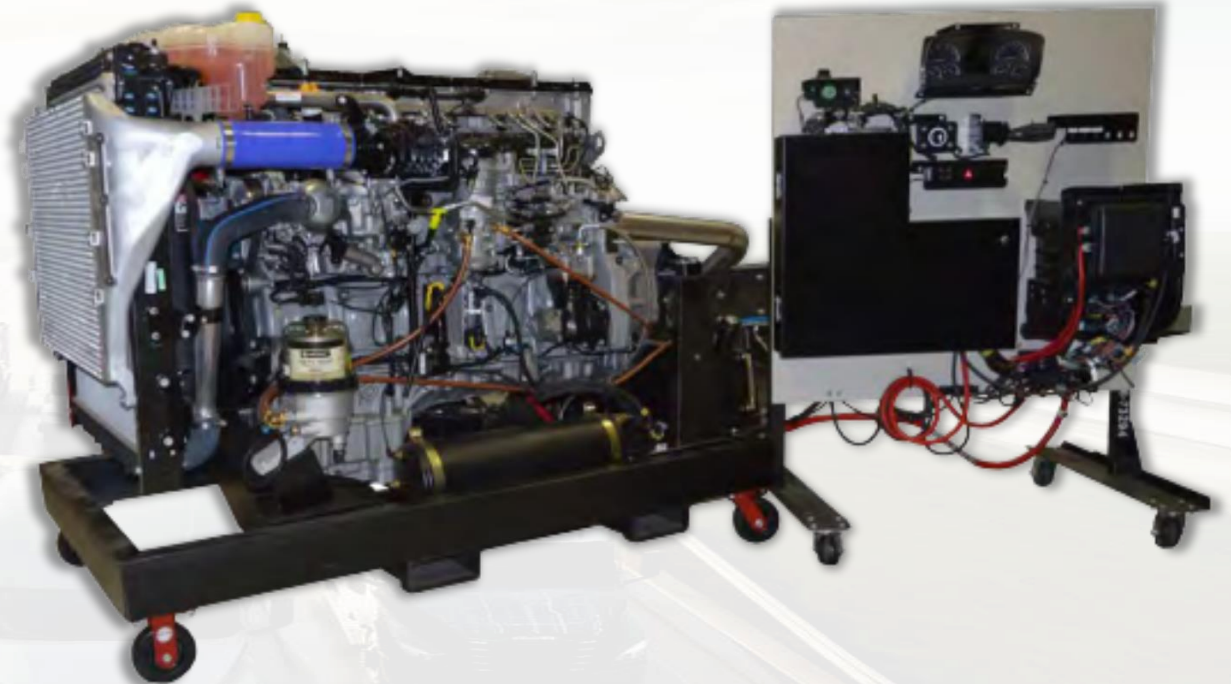
Features the Gen 5 (GATS 2.0) aftertreatment system, including diesel particulate filter, catalyst, and DEF system.

- Complete Training Package**

Delivered with heavy-duty cart, air-to-air package, coolant package, and fuel system package with tank.

- Diagnostic Interface**

Equipped with engine control panel, gauges, switches, instrument cluster, and 9-pin diagnostic plug for interactive learning.



TA-ENG-1200 – Gen 5 DD15 Engine w/ GATS 2.0 & Interface Board

Overview:

The TA-ENG-1250 is a remanufactured Detroit Gen 5 DD15 engine mounted on a light-duty roller cart, designed specifically for teardown and rebuild instruction. This stripped-down configuration is ideal for hands-on mechanical training without the complexity of operational systems.

Key Features:

- Remanufactured Gen 5 DD15 Engine**

Provides a reliable platform for mechanical instruction and component familiarization.

- Light-Duty Roller Cart**

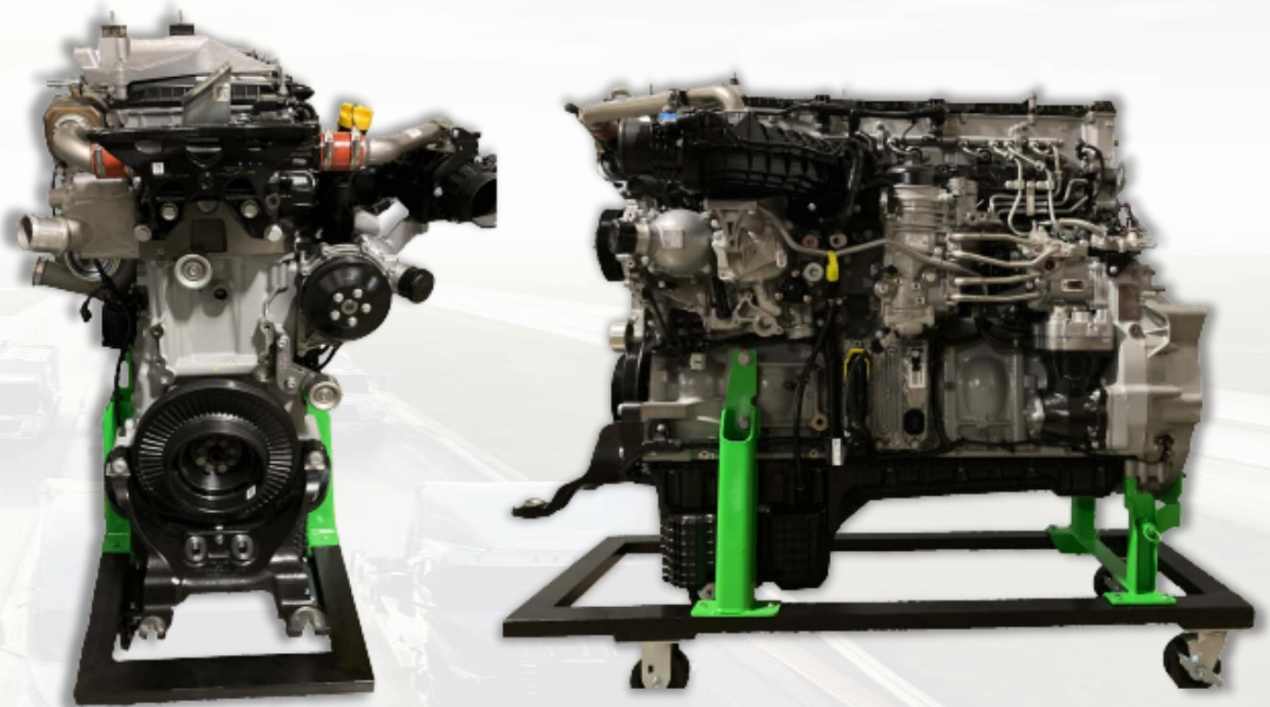
Allows for easy mobility and positioning in classroom or shop environments.

- Simplified Configuration**

Delivered without aftertreatment, coolant, air-to-air, electrical, starting/charging, or fuel packages—ideal for focused teardown and rebuild exercises.

- Training-Focused Design**

Commonly used in technical courses and shop settings to support foundational engine service skills.



DETROIT

Detroit Diesel Electrical Diagnostics Training Kit

(TA-ENG-1435, TA-ENG-1436 and mounting brackets each sold separately)

Overview:

This two-part training solution enhances instruction in Detroit Diesel engine diagnostics by combining the live monitoring capabilities of the DD Breakout Box with the fault simulation functionality of the DD Bug Box. Together, they provide a powerful platform for teaching electrical troubleshooting, system behavior, and diagnostic strategy.



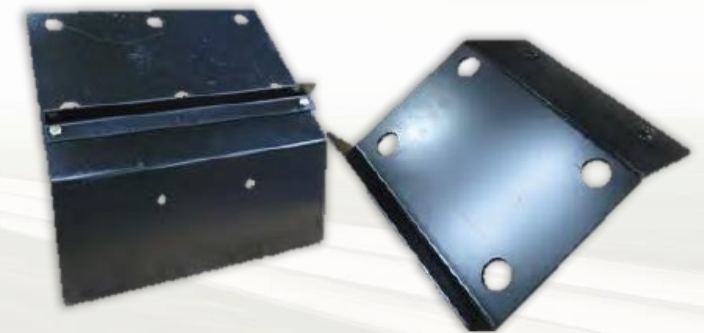
TA-ENG-1435 – DD Breakout Box:

Enables live circuit monitoring on 2007 Series 60, DD13, DD15, and medium-duty DD5/DD8 engines. Includes a 21-pin connector and 120-pin MCM/ACM harness for T-connection into the system, allowing real-time voltage readings during engine operation.

TA-ENG-1436 – DD Bug Box with Harness:



Works in tandem with the Breakout Box to simulate electrical faults. Features toggle-activated fault injection, visual indicators (green for normal, red for fault), and circuits with adjustable resistance. Includes harness for seamless integration.



TA-ENG-1437 – DD Breakout Box Mounting Bracket

TA-ENG-1438 – DD Bug Box Mounting Bracket



DETROIT

Engine Support Equipment for Training Engines

Overview:

These support tools are designed to enhance the usability, mobility, and safety of Detroit DD13 and DD15 training engines in classroom and shop environments. Whether you're running a live engine or preparing for teardown and rebuild instruction, this equipment ensures secure handling and proper setup.



TA-ENG-1340 – DD15/DD13 Heavy Duty Engine Stand

- Designed for use with running DD13 and DD15 training engines.
- Includes front and rear engine mounts for secure positioning.
- Equipped with heavy-duty casters and a floor brake

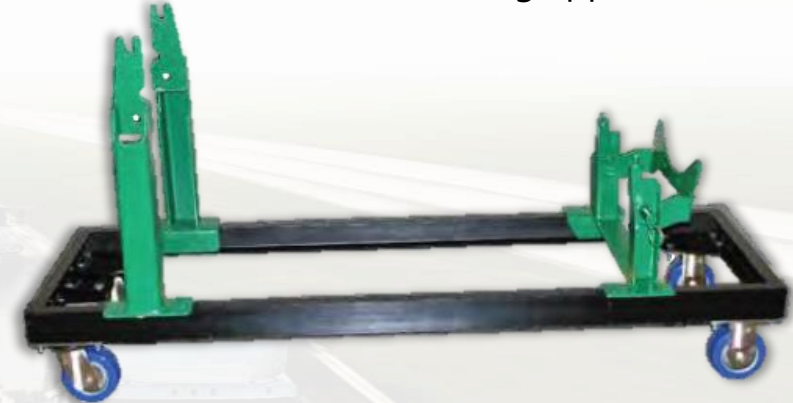


TA-ENG-1370 – 17 Gallon Fuel Tank

- Diesel fuel tank with sight glass and cap.
- Compatible with base training engines and heavy-duty engine stands.
- Provides a clean, safe fuel source for instructional use.

TA-ENG-1370 – DD15/DD13 Engine Roller Cart

- Intended for transporting and positioning non-running engines.
- Features two straight casters, two swivel casters
- Ideal for teardown and rebuild training applications.



DETROIT



Custom built training aids by Daimler Truck North America's Service Training Academy simulate real world diagnostic and repair scenarios in the classroom learning environment.

Each training aid is built with the same factory, aftermarket, and re-manufactured components used on Freightliner and Western Star trucks, ensuring that technicians are familiar with the exact setups seen in the service bay. From complete, working HVAC systems to brake slack adjusters, all functioning components of a truck are available.

Prices listed are manufacturer's suggested retail and do not include tax, crating or shipping costs. All components are new unless otherwise noted. All items are intended for training use only and are subject to availability. Contact Service Training Academy Custom Built Training Aids with custom item inquiries.

For copies of the Vehicle Training Aid Cost Sheets, Order Forms, and most up-to-date pricing, please visit the Training Aids section on the Aftermarket Resource Center (dtnaarc.com).

FREE INDUSTRY-LEADING TRAINING!



Get Ahead is a partnership program between Daimler Truck North America (DTNA), technical schools and DTNA's service network locations. Through the Get Ahead program, technical schools gain access to free DTNA online training.

Students at Get Ahead partner schools earn course credits and certifications recognized by the employers in DTNA's service network.

For more information on Get Ahead, please visit www.trucktechs.com/getahead.

