

## AIR BRAKE TEST (CFR 232)

### TRAINING & EVALUATION SIM

#### BACKGROUND & PROBLEM

Inspecting and testing freight car air brakes, a common railroad task, is a fundamental part of a railroad's initial training for Conductors and Freight Car Mechanics. This inspection and testing, known as Air Brake Test (CFR 232), requires railroads to have multiple freight cars on-site and allocate a significant amount of training time for demonstration, practices, and evaluation.

#### SOLUTION OVERVIEW

To alleviate physical space and time constraints, Railroads can deploy an Interactive 3D Simulation covering the complete inspection process. The simulation allows a student to visually inspect a variety of randomized freight cars, as part of a train, while manipulating brake components as necessary to properly configure the brake system. The student determines correct brake pressure and inspects for brake application & release via an exam practice mode. This gives the student additional practice at their pace with a record of their performance given at the end.

Used for: Classroom Training, Evaluation.

#### FEATURES

Possible train defects:

- Air hose leaking, Piston leaking
- Angle Cock leaking, Retainer Valve leaking
- Cut Out Cock leaking

Complete list [here](#).

Car types: Gondola, Flat, Box, Tanker, Hopper, Well/Intermodal.

Available on PC, Mac, iOS, Android

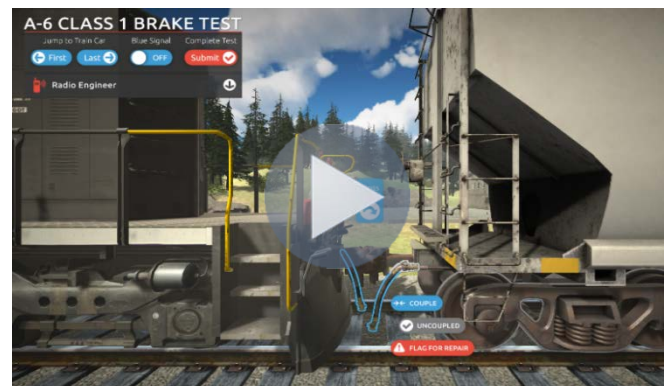
#### BENEFITS

1. Improved knowledge of air brake components and functions and Increased efficiency when performing the Air Brake Test.
2. Reduced need for live equipment (Locomotives/Freight cars allocated for training).
3. A standardized training resource and a formalized tool for refresher training - part of a wider initiative for meeting FRA Part 243 training requirements.

#### WHAT TO EXPECT

After using the sim, employees should be able to:

- Identify and determine the correct positioning of freight car air brake system components
- Manipulate air brake system components and determine correct brake pipe pressure, determine if a brake is applied/released
- Complete a Class I Brake Test (CFR 232)



*“Confidence and mastery has noticeably improved! Where students seemed uncertain, they now know what they’re doing. Training 100 mechanics & 1800 conductors using the sim and up to 15,000 soon.”– Norfolk Southern  
“Rolling the Air Brake Sim to the entire Mechanical group” - CSX*

Want the same results for your workforce? License this simulation for immediate deployment or discuss a custom requirement – [solutions@hwd3d.com](mailto:solutions@hwd3d.com) or call 888.781.0274 ext. 701