



After utilizing the simulation, the student should be able to:

- Identify freight car air brake system components
- Determine the correct positioning of freight car air brake system components
- Manipulate freight car air brake system components
- Determine correct brake pipe pressure
- Inspect brake system components to determine if a brake is applied or released
- Complete a Class I Brake Test – Initial Terminal Inspection (CFR 232)

All steps must be completed and all leaks repaired in order to receive a passing score. Currently, 100% equals a passing score. However, this can be set to any number.

Below is a list of possible train defects:

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

Below are the steps for performing the test successfully.

Successful test for locomotive air supply:

- Set up Blue Flag Protection (for Mechanic)
- Radio Engineer to Apply Full 3 Step (for Conductor)
- Cut in Locomotive Angle Cock
- Couple air hoses on all cars
- Cut in Angle Cocks on all cars
- Set Retainer Valve to Exhaust on all cars
- Cut in Cut Out Cock on all cars
- Radio Engineer to Release Automatic Portion of 3 Step (for Conductor)
- Radio Engineer to Apply Brakes (for Conductor)
- Inspect Piston for brake application on all cars
- Radio Engineer to Release Brakes (for Conductor)
- Inspect Piston for brake release on all cars
- Inspect Brake Rigging on all cars
- Note: the user is not scored for connecting the test device and monitoring the pressure

Successful test for ground air supply:

- Set up Blue Flag Protection (for Mechanic)
- Cut in Ground Air Valve 1

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## HEARTWOOD

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## Class 1 Air Brake Test Sim

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- Cut in Ground Air Valve 2
- Couple air hoses on all cars
- Cut in Angle Cocks on all cars
- Set Retainer Valve to Exhaust on all cars
- Cut in Cut Out Cock on all cars
- Cut out Ground Air Valve 1
- Cut in Reduction Valve
- 20 PSI Reduction
- Cut out Reduction Valve
- 2 minute leak test
- Inspect Piston for brake application on all cars
- Cut in Ground Air Valve 1
- Re-pressurize Air System
- Inspect Piston for brake release on all cars
- Inspect Brake Rigging on all cars
- Note: the user is not scored for connecting the test device and monitoring the pressure

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