



Introduction to Air Brakes

February 25 to 26, 2019

Trolleyworks Conference Room at Altoona Metro Transit (Amtran), 3316 5th Ave, Altoona, PA 16602

This two-day course, based on e-learning materials provided by the Transportation Learning Center, will use a combination of pre-recorded video material and the instructor's own knowledge and experiences to guide classroom presentation and discussions each morning. A fully functioning brake board will also be available to demonstrate how various components of the air brake system generate and distribute air throughout the braking system. As a result of the classroom training technicians will understand the design, operation, maintenance, and repair of the bus air brake systems.

During the afternoon of each day, attendees will be led in a series of hands-on exercises where they will be able to service and maintain bus braking air supply and service systems.

The two-day course will cover:

- Introduction and the Physics of Braking
- Air System Background and Overview
- Air Supply System
- Air Control System

Upon completion of the course, participating technicians will be able to:

- Recognize basic braking physics concepts including Newton's Law, Pascal's Law, A/L Factor, Torque, and Coefficient of Friction.
- Diagnose poor stopping and air leak (static and applied) problems, caused by supply and service system malfunctions; determine needed repairs.
- Check air system build-up and recovery time; determine needed repairs.
- Drain air reservoir tanks; check for oil, water and foreign material; determine needed repairs.
- Inspect and diagnose air compressor, air cleaner, lines and fittings.
- Inspect, test, adjust and diagnose problems with pressure controls (governor/relief valve), un-loader assembly valves, pressure protection valves and filters.
- Inspect, repair or replace air system lines, hoses, fittings and couplings.
- Inspect, test, clean or replace air tank relief valves, check valves, drain cocks, and drain valves.
- Inspect, clean, repair or replace air drier systems, filters, valves, heaters, wiring and connectors.
- Inspect, test, repair or replace low-pressure warning devices.
- Inspect, test and replace air pressure gauges, lines and fittings.
- Inspect, test and replace parking brake override valve.

Hours: Monday, February 25, 2019 – 10 AM to 5 PM
Tuesday, February 26, 2019 – 8 AM to 3:30 PM

Presented by: John Stoy, 1st Class Mechanic at Amtran, assisted by Tom Harney, Transportation Learning Center

Cost: \$190. PPTA [cancellation policy](#) applies.



PennTRAIN

Pennsylvania Training, Resource, and Information Network

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Meals: A light breakfast, lunch, and breaks will be provided both days. Please inform Sara Bowden at sara@ppta.net of any dietary restrictions at least one week in advance.

Lodging: [Fairfield Inn & Suites – Townplace Suites by Marriott Altoona](#), 2915 Pleasant Valley Blvd, Altoona, PA 16602. Room block is available for the nights of February 24 and 25, 2019 at the government rate of \$94/night plus taxes. [Click here to book online](#) or call 814-946-0422 (ask for PA Public Transportation Association block). Rooms will be released on February 10, 2019 (or when sold out).

Parking: Free, ample street parking is available at the Trolleyworks Conference Room.

Attire: Casual. Because it can be a challenge to keep the meeting room at a temperature that accommodates everyone, we recommend bringing a sweater or jacket to stay comfortable.

Maximum Class Size: 15

Attendee Registration:

Submit to Sara Bowden, PennTRAIN Program Coordinator

Email: sara@ppta.net Fax: 717-234-7176 Mail: 115 Pine Street, Harrisburg, PA 17101

Organization Name: _____

Attendee Name: _____

Attendee Title: _____

Attendee Email Address: _____

Attendee Phone Number: _____

Use of a laptop is not mandatory but will enhance the learning experience. Please indicate attendee's laptop preference here:

Attendee will bring a laptop

Attendee will borrow a PennTRAIN laptop

Organization Contact Name: _____

Organization Contact Email Address: _____

Method of Payment: Please invoice me OR Check enclosed # _____