

# FIRE TRAINING PROGRAM

## LESSON PLAN

**Program:** Firefighter I – Emergency Vehicle Incident Program

**Lesson Title:** Important Physical Forces

**Number:** Lesson 3

### Lesson Objectives:

Upon completing this lesson, the student will be able to:

1. Write a brief description of the following terms, and state how they affect an emergency vehicle's operation.
  - Velocity
  - Centrifugal force
  - Inertia
  - Friction
2. Indicate on a drawing the effects of acceleration, deceleration and turning on a vehicle's weight distribution.
3. State the primary cause of **brake fade**.
  - Brake overheating is caused by the following:
    - Driving too fast for conditions with heavy, continuous braking with resulting overheating.
    - Brakes out of adjustment
4. Describe the effects of weight transfer on an emergency vehicle.
5. Describe the types of brakes used in the fire service today.
  - Hydraulic – shoe type and disc type
  - Air – shoe type (with “s” cams)
  - Air – disc type
  - Air – shoe type (wedge brakes)
  - ABS – Anti-lock braking system

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### Performance Standards Covered In This Lesson

- 2-1 (a)
- 2-1 (c)
- 2-1 (h)
- 2-1 (i)