

# VEHICLE AND MACHINERY TECHNICIAN OBJECTIVES

NOTE: The numbers in ( ) refer to the text of NFPA. All 8.4 numbers refer to 1670 Chapter 8, Vehicle and Machinery Search & Rescue. All 8.1 numbers refer to NFPA 1006, Chapter 8, Vehicle and Machinery Rescue.

## 55-1 Vehicle Design

- 55-1.1 Identify the main classifications of large/heavy vehicles. (Outline) (8.1.7(A)(B))
- 55-1.2 Identify the construction characteristics of the doors on large/heavy vehicles. (8.1.7(A)(B))
- 55-1.3 Identify the construction of large/heavy vehicle roofs and items attached to the roofs. (8.1.7(A)(B)) (8.1.4(A))
- 55-1.4 Identify the electrical components of large/heavy vehicles and the proper method of disconnecting batteries. (8.1.5)
- 55-1.5 Identify the type of glass used in the windshield, side and rear windows of large/heavy vehicles. (8.1.7(A)(B))
- 55-1.6 Identify the components of a typical fuel system and safe procedures for isolating fuel tank(s) of large/heavy vehicles. (8.1.7(A)(B))
- 55-1.7 Identify the procedures to disconnect the brake lines from a semi-tractor trailer. (8.1.4)
- 55-1.8 Identify the dangers of air brake canisters. (8.1.5(A)(B))
- 55-1.9 Identify the use of the fifth wheel on a semi-tractor unit. (8.1.7(A)(B))
- 55-1.10 Identify various bus types and their features. (Outline) (8.1.7(A)(B))
- 55-1.11 Identify the construction and safety features of buses. (8.1.7(A)(B))
- 55-1.12 Identify hazards and requirements unique to the agricultural rescue environment including: fixed machinery and implements, mobile machinery and implements and livestock. (8.1.7(A)(B))
- 55-1.13 Identify the center of gravity for overturned large/heavy vehicles. (8.1.8(A)(B))

55-2 Tool Knowledge (uses and limitations)

- 55-2.1 Identify the different types of equipment, their use and special features. (Outline) (8.4.2(4))
- 55-2.2 Identify limitations of your rescue equipment at these accidents. (8.4.2(4)) (8.1.5)
- 55-2.3 Identify the uses and limitations of a buttress stabilization device. (8.4.2(3)) (8.1.4)

55-3 Procedures (stabilization, techniques and entrapments)

- 55-3.1 Identify stabilization techniques for large / heavy vehicles that are on their side. (8.4.3) (8.4.2(4)) (8.1.4)
- 55-3.2 Identify stabilization techniques for large / heavy vehicles that are upright. (8.4.3) (8.4.2(4)) (8.1.4)
- 55-3.3 Identify the load bearing capacity of box crib systems made of 4"x 4" cribs and 6"x 6" cribs and 2 vs. 3 tiers. (Student Handout)
- 55-3.4 Identify the techniques to access the upper areas of a large / heavy-vehicle using a crib platform and another vehicle. (8.1.6) (8.1.7) (8.4.2(2))
- 55-3.5 Identify how to stabilize / crib the tractor and any attached equipment. (8.4.3) (8.4.2(4)) (8.1.4)
- 55-3.6 Identify ways to stabilize cars on their side, on the roof and cars on top of other vehicles. (8.4.3) (8.4.2(4)) (8.1.4)
- 55-3.7 Identify the types and techniques of door removals, sidewall, and rear wall openings for patient removal. (8.1.7(A)(B))
- 55-3.8 Identify the process by which an individual would be disentangled/ extricated from various types of machinery. (8.1.8(A)(B)) (8.4.2(2))

**55-5 Practical Skill Objectives**

- 55-5.1 Demonstrate stabilization techniques for large/heavy vehicles that are upright. (8.1.4(A)(B)) (8.4.2(3))**
- 55-5.2 Demonstrate stabilization techniques for large/heavy vehicles that are on their side. (8.1.4(A)(B)) (8.4.2(3))**

- 55-5.3 Demonstrate techniques to stabilize/crib equipment when no anchor is available. (Cribbing and Picket Systems) (8.1.4(A)(B)) (8.4.2(3))**
- 55-5.4 Demonstrate the safe procedures for isolating fuel tanks. (8.1.3(A)(B)) (8.4.2(1))**
- 55-5.5 Demonstrate disconnecting the semi-tractor from the trailer. (8.1.4) (8.1.6)**
- 55-5.6 Demonstrate accessing the upper areas of a truck using a crib platform and another vehicle next to the truck. (8.1.6) (8.1.7)**
- 55-5.7 Demonstrate procedures for patient access through a truck door. (8.1.7) (8.4.2(2))**
- 55-5.8 Demonstrate making a rear wall opening large truck. (8.1.7) (8.4.2(2))**
- 55-5.9 Demonstrate making a sidewall opening on a large truck. (8.1.7) (8.4.2(2))**
- 55-5.10 Demonstrate roof displacement procedures and removal techniques on a large truck. (8.1.7) (8.4.2(2))**
- 55-5.11 Demonstrate patient removal from an upright truck. (8.1.8) (8.4.2(2))**
- 55-5.12 Demonstrate procedures for patient access through bus door. (8.1.7) (8.4.2(2))**
- 55-5.13 Demonstrate a bus rear wall opening. (8.1.7) (8.4.2(2))**
- 55-5.14 Demonstrate a bus sidewall opening. (8.1.7) (8.4.2(2))**
- 55-5.15 Demonstrate the technique of locating the center of gravity for a large/heavy vehicle. (8.1.4(A)(B)) (8.4.2(3))**
- 55-5.16 Demonstrate techniques to stabilize/crib the tractor and any attached equipment. (8.1.4(A)(B)) (8.4.2(3))**
- 55-5.17 Demonstrate rescue techniques at a tractor rollover incident with entrapment. (8.1.8(B)) (8.4.2(4))**
- 55-5.18 Demonstrate the setup of a Landing Zone in accordance with AHJ or IDOT guidelines. (5.2.6(A)(B))**
- 55-5.19 Demonstrate the techniques to stabilize cars on their side. (8.1.4(B)) (8.4.2(3))**

- 55-5.20 Demonstrate the techniques to stabilize cars on their roof. (8.1.4(B)) (8.4.2(3))**
- 55-5.21 Demonstrate the techniques to stabilize a car partially on top of another vehicle. (8.1.4(B)) (8.4.2(3))**
- 55-5.22 Demonstrate the techniques to remove a patient entangled in an auger. (8.1.8(A)(B)) (8.4.2(2))**
- 55-5.23 Demonstrate rescue techniques to remove a patient entangled around a PTO shaft by disassembly. (8.1.8(A)(B)) (8.4.2(2))**
- 55-5.24 Demonstrate the techniques to remove a patient trapped under equipment attached to a 3-point hitch by raising the equipment. (8.4.2(3))**
- 55-5.25 Demonstrate the techniques to stabilize equipment to prevent injury to a patient in the event of hydraulic failure. (8.1.5(A)(B)) (8.4.2(2)(3))**
- 55-5.26 Demonstrate appropriate incident termination activities. (8.1.10)**