

CHAPTER

15

Trailer Service and Inspection

Instructor Name: (Your Name)

Objectives

Upon completion and review of this chapter, the student should be able to:

- List the benefits of a well-planned trailer preventive maintenance program.
- Explain the construction of aluminum sheet and post vans.
- List and explain four methods of leak testing a van trailer.
- Describe FRP trailer construction.
- Explain maintenance and inspection procedures for FRP trailers.
- Describe the pros and cons of swinger style doors and roll-up doors, and describe maintenance procedures for each.

Objectives Continued

- Describe trailer wood floor maintenance procedures.
- List safety procedures that must be adhered to while performing service work on dump trailers.
- Perform a trailer axle alignment inspection.
- Perform an inspection on a rear impact guard to ensure compliance.
- Perform a trailer service on a van, flatbed, or dump-style trailer.

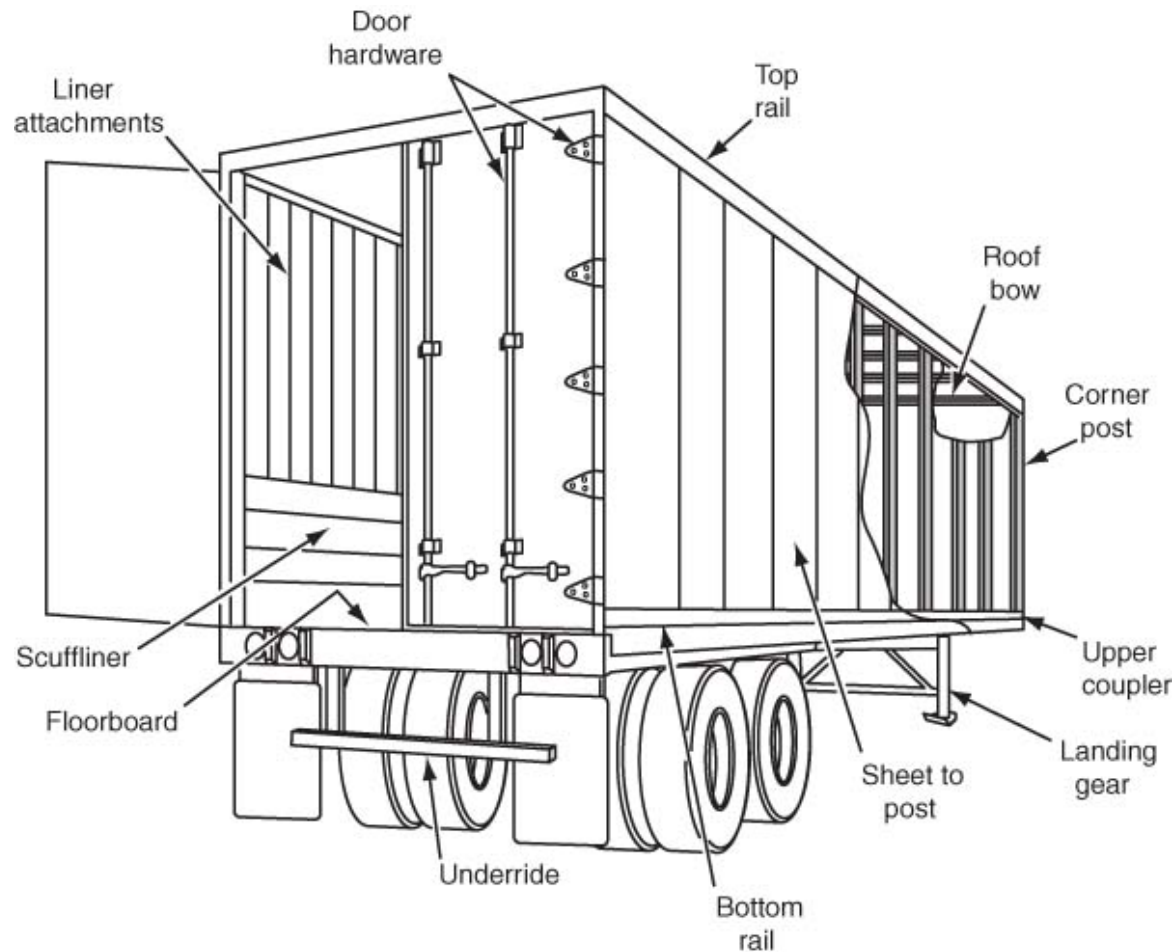
Van Trailer



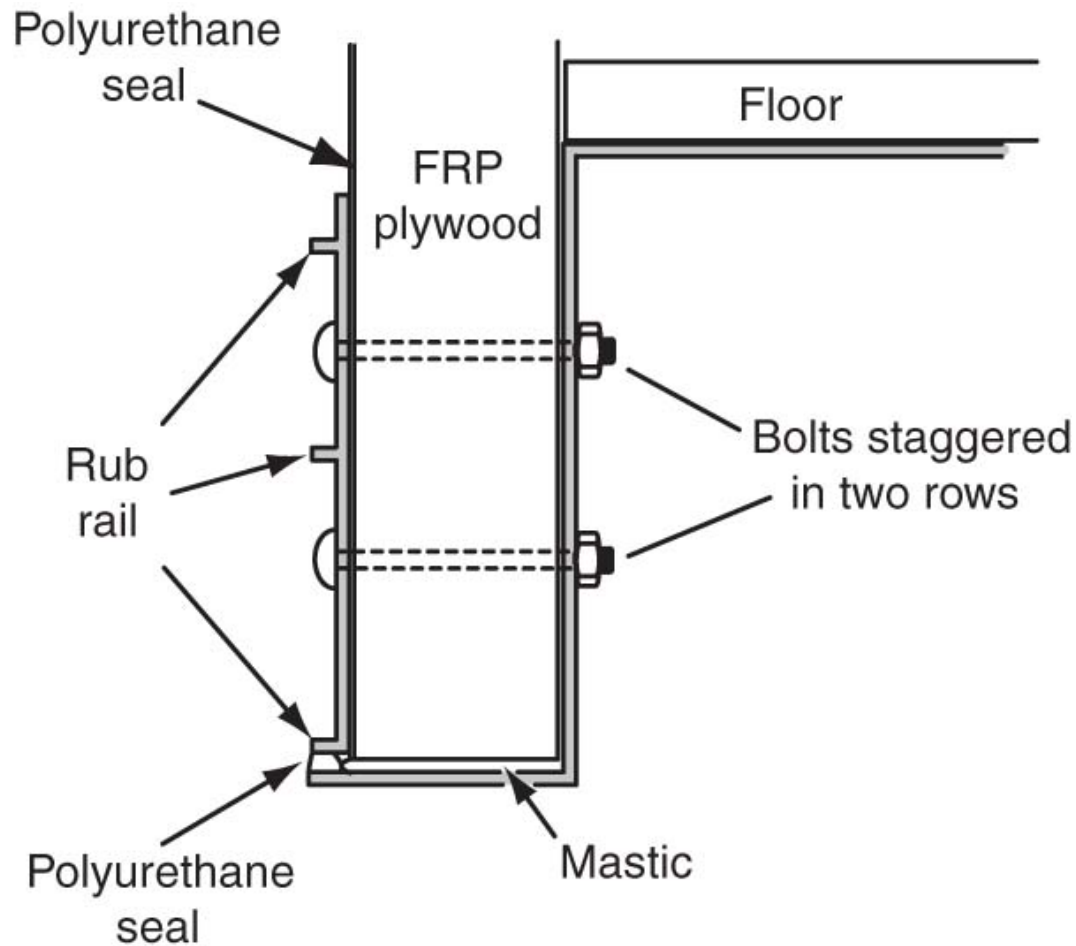
Scuff Liner



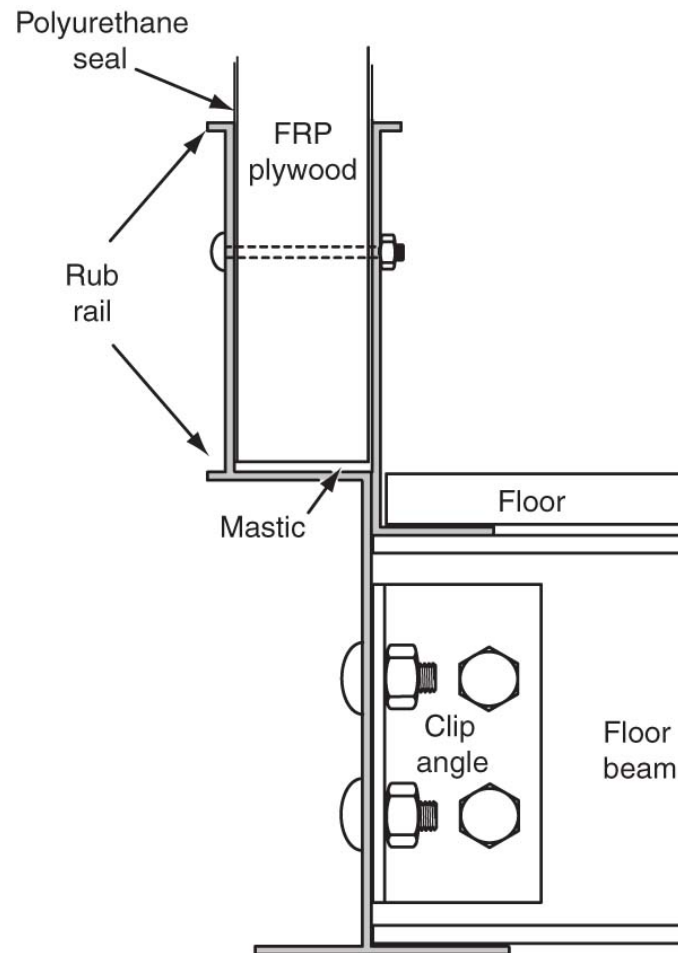
Van Trailer Components



Single Shear Construction



Double Shear Construction

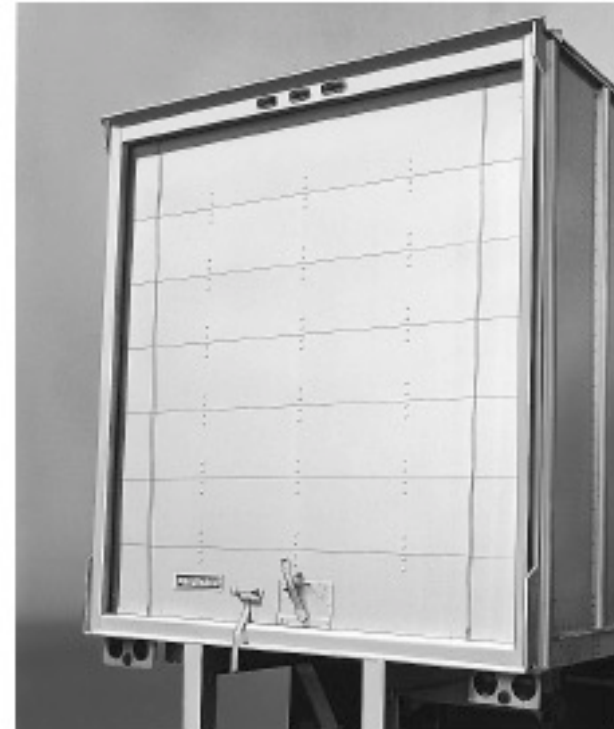


Van Doors

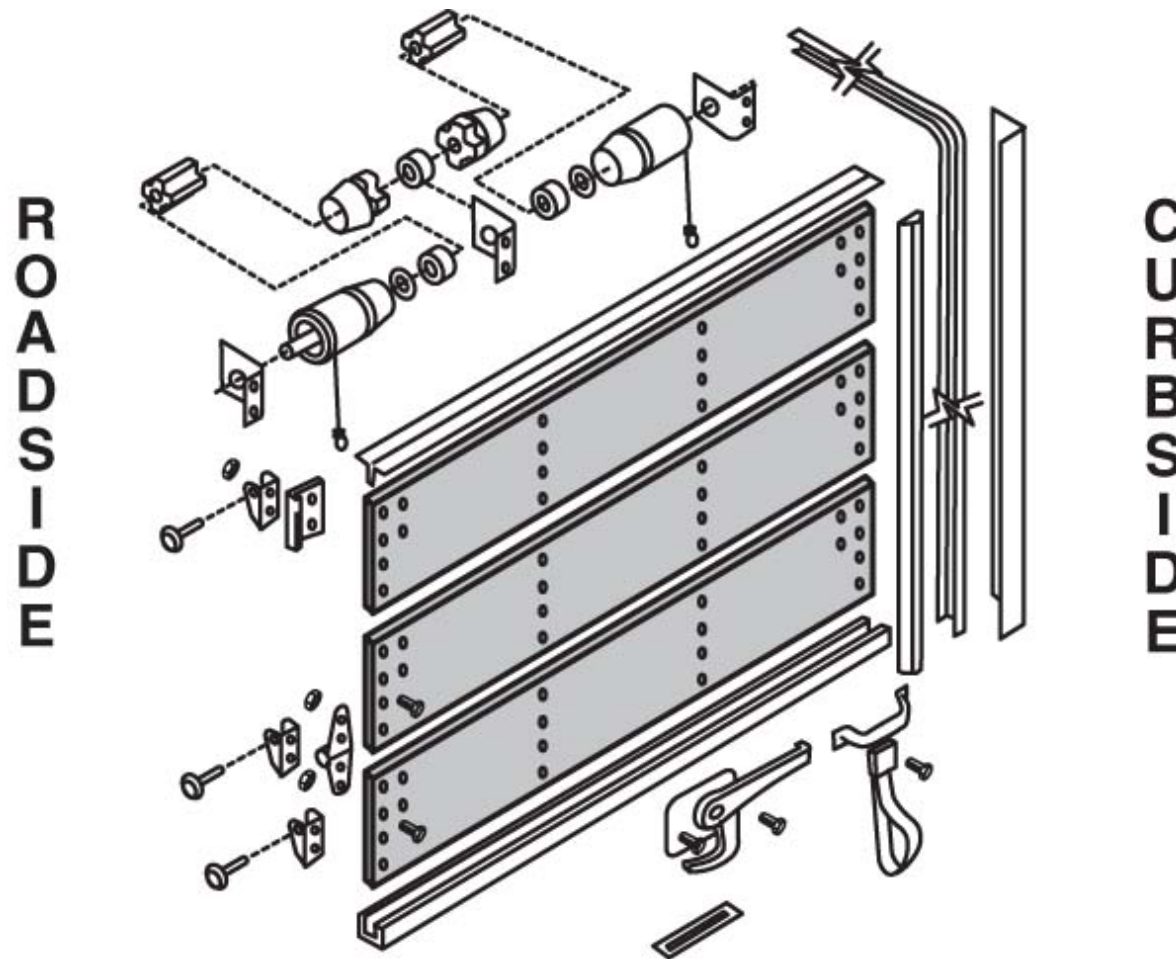
Swing Doors

**A**

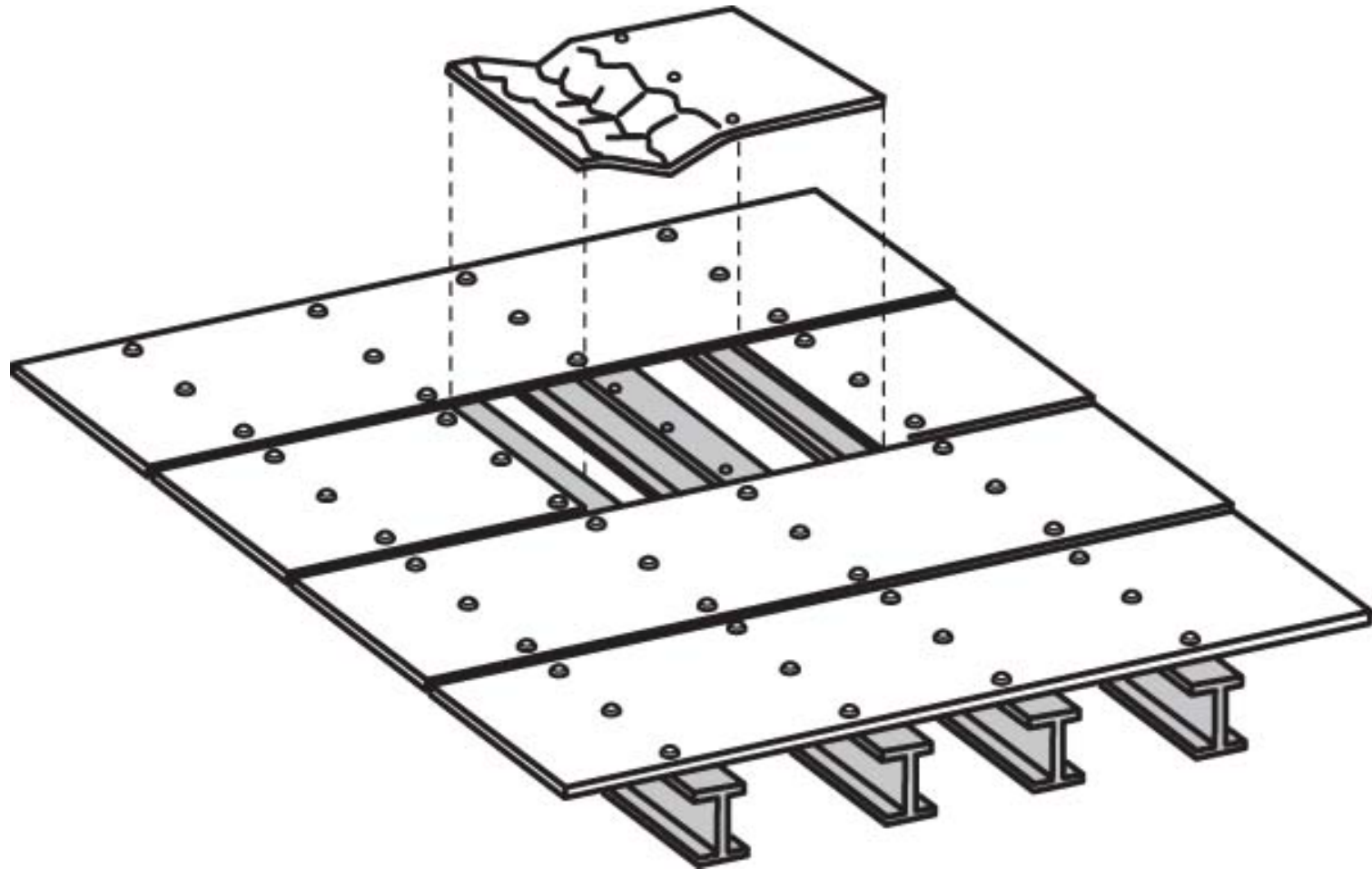
Rolling or Overhead

**B**

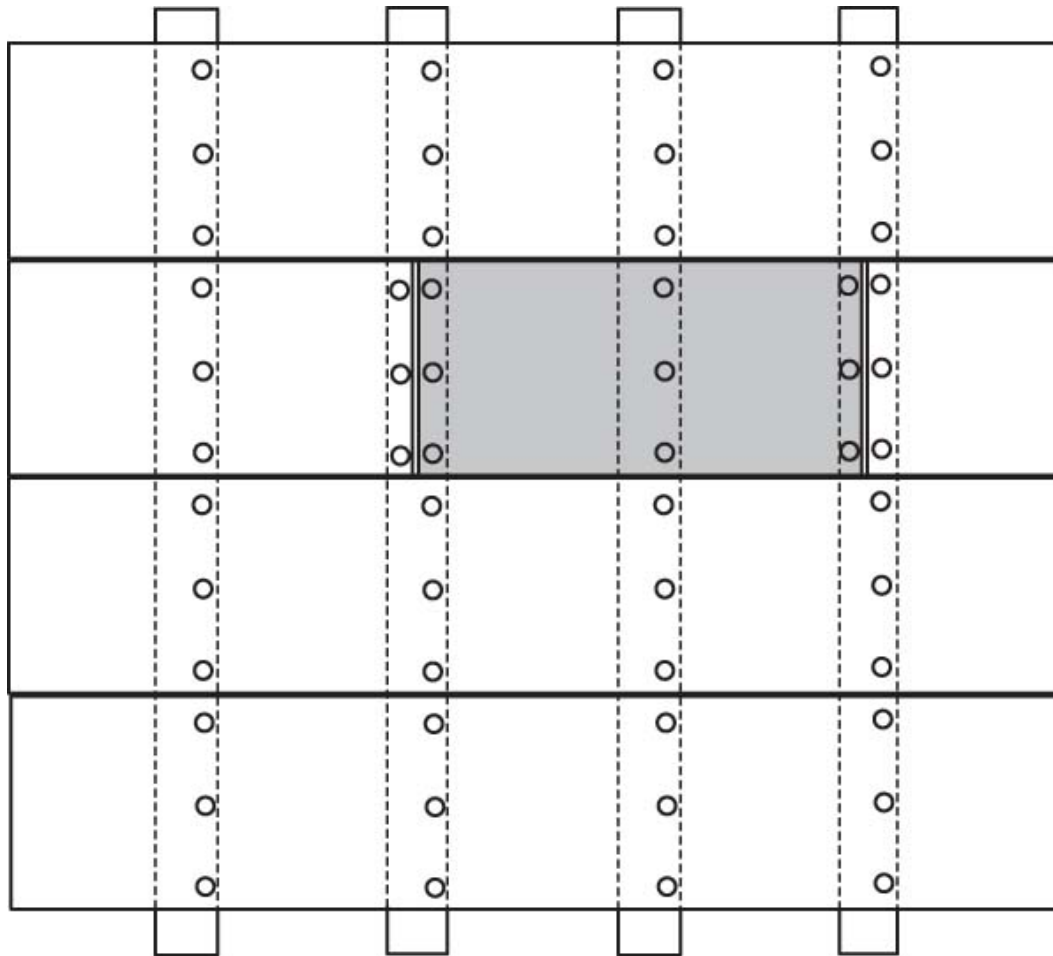
Roll Up Door Components



Removing Damaged Floorboard



Butt Joints

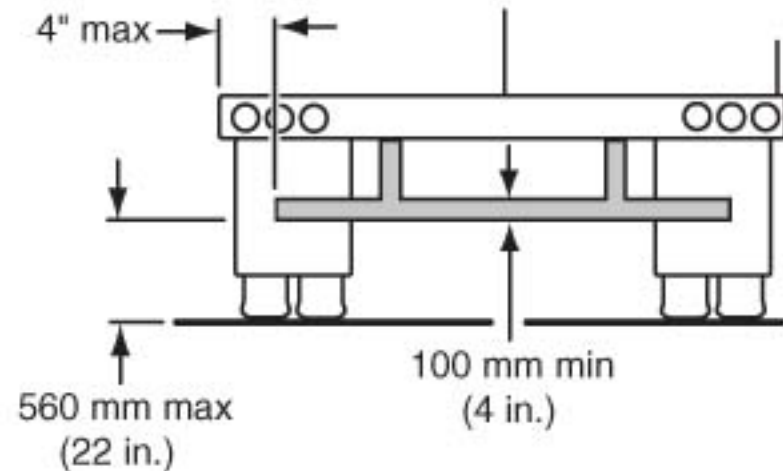
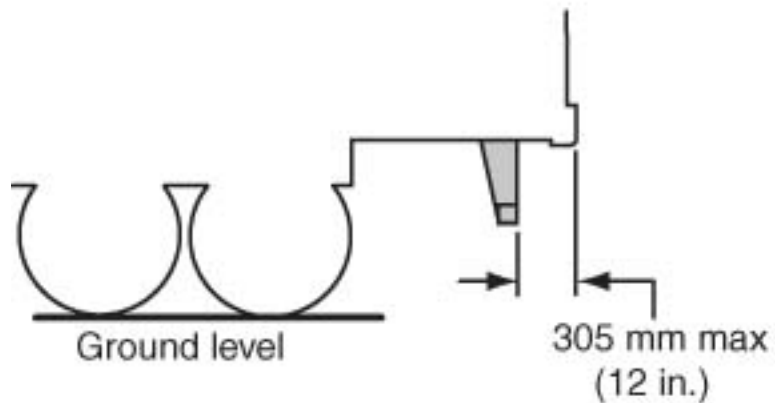


Dump Trailers

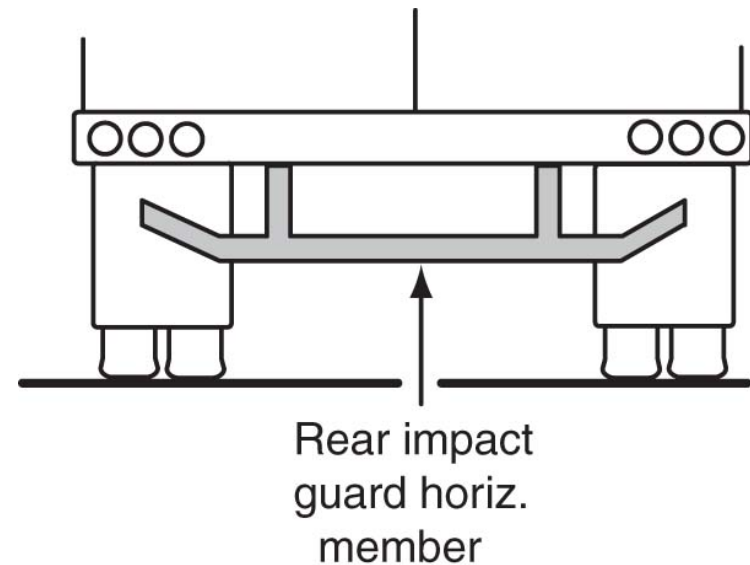
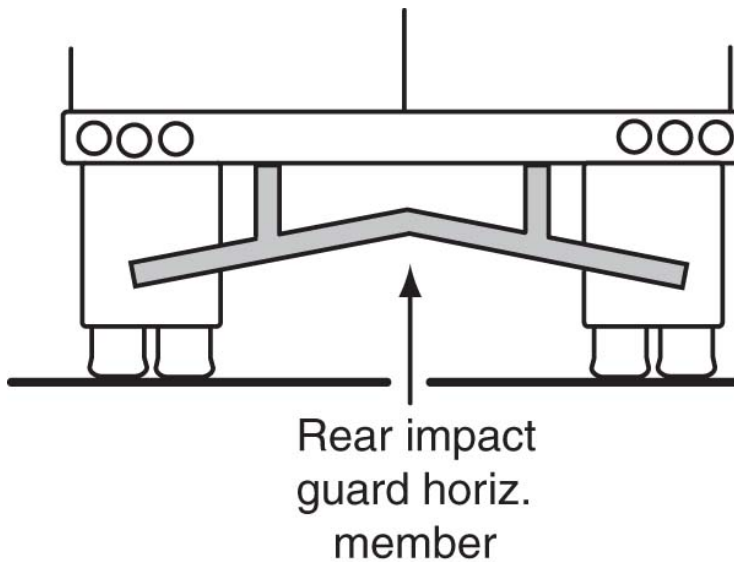
**A****C****D****B****E**

Underride Dimensions

NOTE: All dimensions are for unloaded trailers on a flat surface.

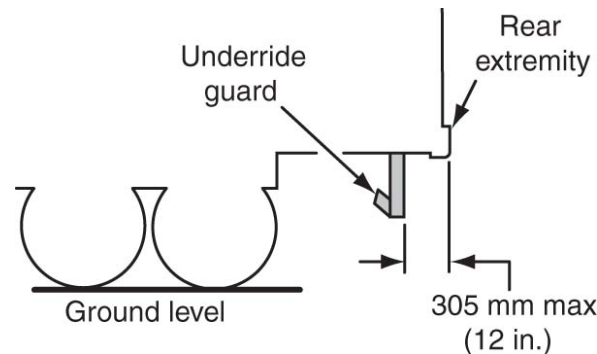
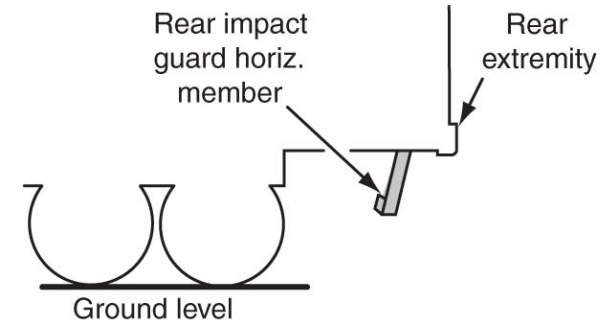
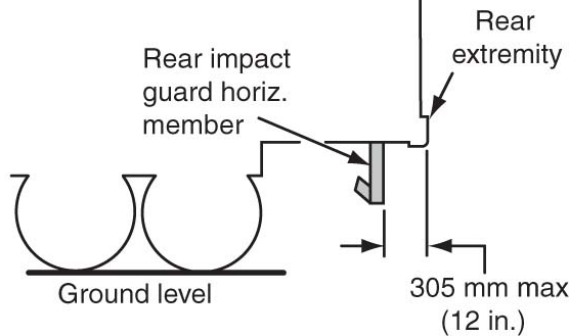


Horizontal Members

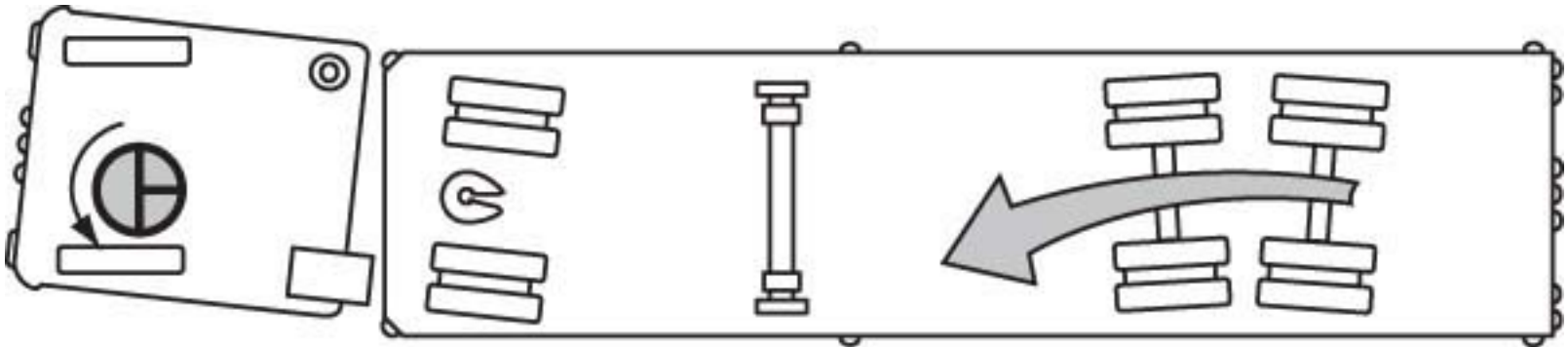


Under Guard Bends

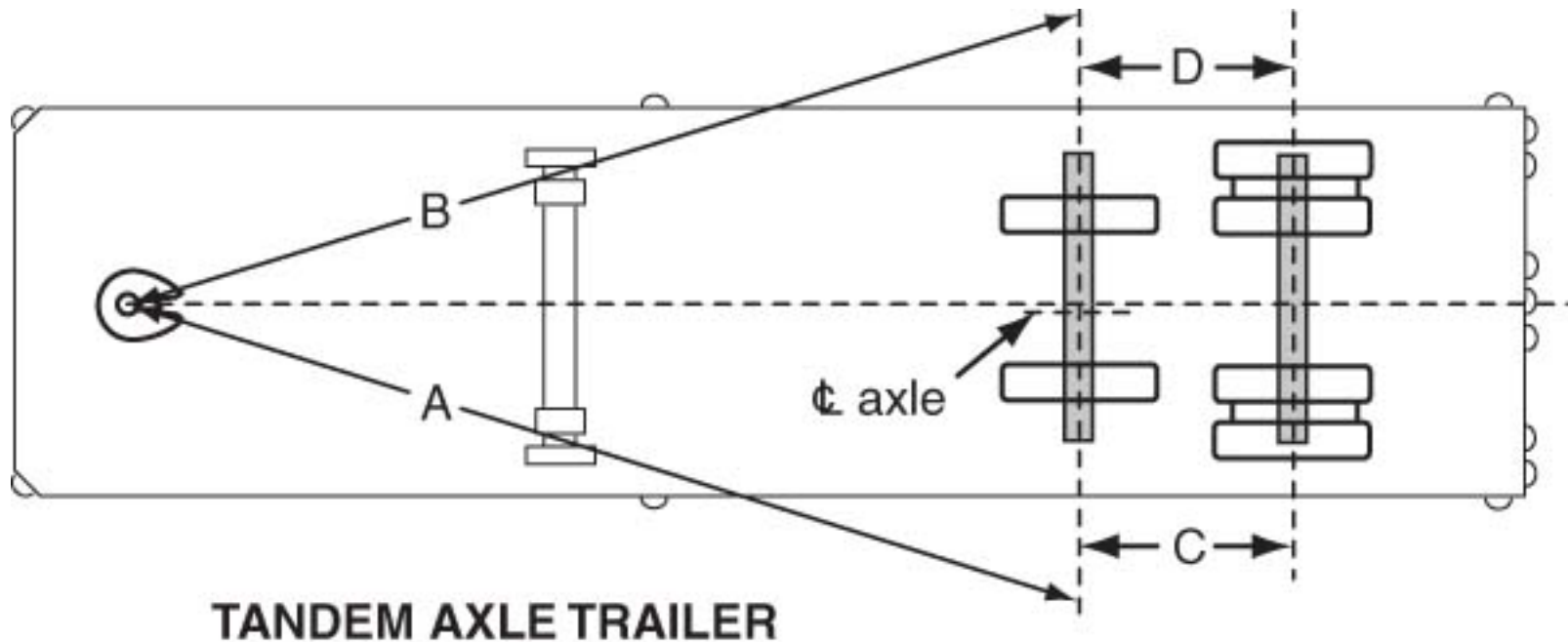
If bent forward less than 3 inches, repair is not needed as long as it meets dimensions given.



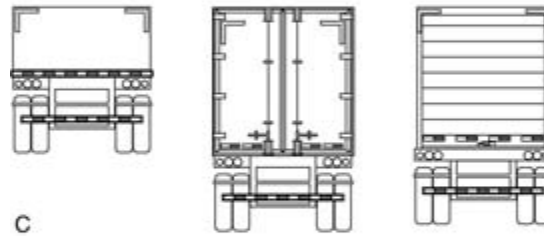
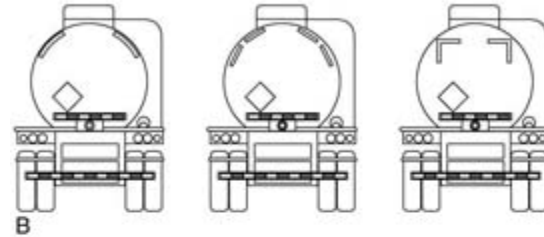
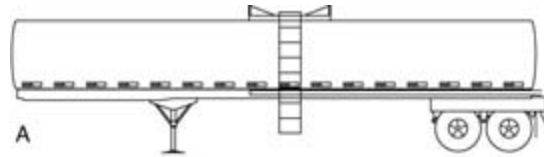
Dog Tracking Trailer



Axle Measurements



Location of Reflective Tape



Summary

- Maintenance programs are necessary to ensure the designed life expectancy of the vehicle and its components.
- Aluminum sheet and post vans are constructed so the posts act as the major sidewall structural members connecting the top and bottom side rails together.
- For unibody trailers, it is imperative that all rivets or fasteners connecting the top and bottom rails as well as all cross-member members be present and secure.

Summary Continued

- Leaks in van trailers may be found by a light test, water test, smoke test, or ultrasonic test.
- FRP plywood is multiple layers of matt fiberglass cloth bonded to both sides of a plywood core, providing excellent strength and corrosion resistance.
- The two types of doors used on van-type trailers are hinged and roll-up.

Summary Continued

- The trailer's floor system should be inspected on every PMI to ensure it can safely handle the loads it is intended to support and ensure its service life.
- New floorboards must be supported by four crossmembers.
- Rear impact guard, or underride guard, should be inspected regularly for cracked welds, cracked or fractured vertical members, cuts and tears in any member, and for dimensional conformity.

Summary Continued

- Poorly aligned trailer axles will cause the trailer to dog track and wear tires prematurely.
- The National Highway Safety Administration Regulations require that red and white alternating striped reflective tape, also known as conspicuity tape, be applied to the full trailer width at the rear of the trailer, near the van base.