

6. APTA PR-IM-S-006-98

Standard for Passenger Car Draft Gear Periodic Inspection and Maintenance

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APTA PRESS Task Force

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Abstract: This standard covers the basic procedures for the periodic inspection and maintenance of passenger car draft gears, with emphasis on the maintenance of safety appliances and other safety critical systems.

Keywords: draft gear, draft gear periodic inspection and maintenance

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Introduction

(This introduction is not a part of APTA PR-IM-S-006-98, Standard for Passenger Car Draft Gear Periodic Inspection and Maintenance.)

This introduction provides some background on the rationale used to develop this standard. It is meant to aid in the understanding and application of this standard.

This standard describes the basic inspection and maintenance functions for draft gears on passenger cars. It is intended for the following:

- a) Individuals or organizations that maintain draft gears on passenger cars;
- b) Individuals or organizations that contract with others for the maintenance of draft gears on passenger cars; and
- c) Individuals or organizations that influence how draft gears are maintained on passenger cars.

This standard is designed to help organizations incorporate safety considerations during the maintenance process.

This standard is intended to satisfy the following objectives:

- Incorporate safety considerations during the inspection and maintenance process;
- Identify those maintenance standards and inspection criteria that provide a high level of passenger safety;
- Identify those maintenance standards and inspection criteria that provide a high level of crew safety; and
- Identify the skills and training requirements necessary for maintenance personnel to apply these standards.

Participants

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Standard for Passenger Car Draft Gear Periodic Inspection and Maintenance

1. Overview

This document establishes a standard for draft gear inspection and maintenance.

1.1 Scope

This standard for draft gear inspection and maintenance applies to all passenger cars. It is intended to be used by railroads for cyclic inspection, and maintenance of passenger draft gears.

The passenger rail industry phased this standard into practice over the six-month period from July 1 to December 31, 1999. The standard took effect January 1, 2000.

1.2 Purpose

This standard is intended for railroads in order to apply basic procedures for the periodic inspection and maintenance of draft gears of passenger cars, with emphasis on maintenance of safety appliances and other safety critical systems.

These systems (if applicable) are essential to the safe operation of passenger cars.

2. References

This standard shall be used in conjunction with the following publications. When the following standards are superseded by an approved revision, the revision shall apply.

APTA PR-IM-S-013-99, Rev. 1, Standard for Passenger Car Periodic Inspection and Maintenance.

Original equipment manufacturer instructions (OEM).

Standard maintenance procedure (SMP). (See 3.1.3)

49 CFR, Part 215, Railroad Freight Car Safety Standards, Subpart B—Freight Car Components, Subsection 215.127, Defective Draft Arrangement, October 2000

49 CFR, Part 215, Subpart B, Subsection 215.129, Defective Cushioning Device, October 2000

3. Definitions, abbreviations, and acronyms

3.1 Definitions

For the purpose of this recommended practice, the following terms and definitions apply:

3.1.1 original equipment manufacturer (OEM): The technical documentation produced by the organization that built or manufactured a specific piece of passenger rail equipment describing maintenance procedures and frequencies for that piece of equipment.

3.1.2 periodic maintenance: The performance of selected inspection and maintenance actions on systems or sub-systems. Regulatory agencies or the railroad may set the frequency of these actions. The frequency may be expressed as a function of time (i.e. days, weeks, or months) or of utilization (i.e., mileage, cycles, etc.).

The scope of these inspection and maintenance actions must be in full compliance with all applicable federal, state, and local regulations.

3.1.3 standard maintenance procedure (SMP): The internal railroad document giving specific instruction on how to perform maintenance on a specific system or compound.

3.2 Abbreviations and acronyms

APTA	American Public Transportation Association
CFR	Code of Federal Regulations
OEM	original equipment manufacturer instructions
PRESS	Passenger Rail Equipment Safety Standards
SMP	standard maintenance procedure (unique to individual railroads)

4. Frequency of conduct

The frequency of conduct of this task shall be as specified in and in compliance with the requirements of Section 4 of *APTA PR-IM-S-013-99, Rev. 1, Standard for Passenger Car Periodic Inspection and Maintenance*¹.

5. Draft gear periodic inspection and maintenance requirements

5.1 Tools/materials

Standard tools carried by maintenance personnel are sufficient for this inspection task. No specific materials are required.

5.2 Safety/personal protective equipment

Personal protective equipment as required by the operating property shall be worn at all times in the performance of this inspection task.

5.3 Training requirement

Railroads and their contractors shall develop and execute training programs that equip employees with the knowledge and skills necessary to safely and effectively perform the tasks outlined in this standard.

6. Inspection and maintenance procedures

¹ For references in Italics, see Section 2.

CAUTION--Safety hazard

Ensure that equipment is secured against uncontrolled movement before commencing inspection and maintenance procedures.

NOTE -these procedures are intended to be a visual inspection. No disassembly is required unless defects are found.

6.1 Yokes**6.1.1 Wear limits, cause for renewal**

- a) Bent, broken, or cracked yokes are cause for replacement.
- b) Yoke straps worn more than 25% of its cross sectional area are cause for renewal.

6.1.2 Inspection

The inspection and maintenance procedure for yokes consists of the following steps:

- a) Yoke pin and bushings shall be inspected for excessive wear, as defined by original equipment manufacturer (OEM) instructions and/or standard maintenance procedure (SMP).
- b) Yoke components excessively worn, cracked, broken and/or with portions missing must be replaced.
- c) Carriers and pin retainer plates must be inspected for wear and proper securement. Loose plates should be tightly secured.
- d) Carriers and/or pin retainer plates that are cracked, broken, or worn more than 50% of original thickness must be replaced.

6.2 Draft gears**6.2.1 Wear limits, cause for renewal**

- a) Outer rubber rings completely broken or pulled away from the center plate must be replaced.
- b) Draft gears removed from car for any reason should be inspected in accordance with the OEM and renewed or replaced as needed, prior to reinstallation.
- c) Draft gear followers that are bent, broken, or excessively worn shall be replaced.

6.2.2 Inspection

The inspection and maintenance procedure for draft gears consists of the following step:

- a) Inspect pin and bushing for any visible defects.