



DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

49 CFR Part 229

[Docket No. FRA-2025-0126]

RIN 2130-AD50

Expanding Certain Locomotive Wheel Set Diameter Variations

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: FRA proposes to amend its locomotive safety regulations to expand the maximum permitted variation in diameter for locomotive wheel sets using alternating current technology, in response to a Class I railroad's May 2019 petition for rulemaking and innovations in traction motor control.

DATES: Comments on the proposed rule must be received by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. FRA may consider comments received after that date, but only to the extent practicable.

ADDRESSES: *Comments:* Comments related to Docket No. FRA-2025-0126 may be submitted by going to <https://www.regulations.gov> and following the online instructions for submitting comments.

Instructions: All submissions must include the agency name, docket number (FRA-2025-0126), and Regulatory Identification Number (RIN) for this rulemaking (2130-AD50). All comments received will be posted without change to <https://www.regulations.gov>; this includes any personal information. Please see the Privacy Act heading in the **SUPPLEMENTARY INFORMATION** section of this document for Privacy Act information related to any submitted comments or materials.

Docket: For access to the docket to read background documents or comments received, go to <https://www.regulations.gov> and follow the online instructions for accessing the docket.

FOR FURTHER INFORMATION CONTACT: Gary Fairbanks, Staff Director, Motive Power & Equipment Division, Federal Railroad Administration, telephone: (202) 230-9594, email: gary.fairbanks@dot.gov; or Michael Masci, Attorney Adviser, Federal Railroad Administration, telephone: (202) 302-7177, email: michael.masci@dot.gov.

SUPPLEMENTARY INFORMATION:

I. Background

Consistent with the deregulatory agenda of President Donald J. Trump and Secretary of Transportation Sean P. Duffy, which seeks to unleash America's economic prosperity without compromising transportation safety, FRA is reviewing its regulatory requirements in parts 200 through 299 of title 49, Code of Federal Regulations (CFR). Under 49 CFR part 229, *Railroad Locomotive Safety Standards*, FRA prescribes minimum Federal safety standards for all locomotives except those propelled by steam power. Some of the requirements contained in part 229 could be updated to reduce burdens, make technical or conforming changes, or otherwise adjust to advancing technology without any adverse effect on railroad safety. Please review the **SECTION-BY-SECTION ANALYSIS** below for the relevant information related to each proposed change.

II. Section-by-Section Analysis

Section 229.73 *Wheel sets*

FRA proposes to amend paragraph (b) of this section to expand the maximum permitted variation in diameter for locomotive wheel sets using alternating current (AC) technology. In May 2019, Union Pacific Railroad submitted a petition for rulemaking

under 49 CFR part 209 on the basis that “[n]ew technology with individual axle control developed and placed in service after 1980 provides the basis for change which will result in better customer service through a reduction of locomotive out of service time and increased wheel life without impacting safety.”¹

Generally, excessive wheel size variation is a safety concern due to the potential impact on wheel slip and truck dynamics. For older locomotives equipped with direct current (DC) traction motors, excessive wheel size variation causes current imbalance and triggers wheel slip corrections, including unnecessary sanding, removing tractive effort, and removing power. These corrections can have adverse effects on the equipment and efficiency of operations but are necessary to prevent more serious safety hazards like damage to the rail. Newer locomotives equipped with AC traction motors utilize single axle control technology to apply voltage and control current more precisely to each wheel set based on operating conditions. As such, the AC traction motors function as an independent wheel slip correction system that do not use wheel size variation as a trigger for correction.

Despite the improvements to prevent wheel slip, wheel sets on locomotives equipped with AC traction motors still need to minimize wheel size variation to help maintain proper truck dynamics. Excessive wheel size variation can decrease the effectiveness of weight distribution from corresponding trucks, and the trucks’ inability to help absorb the impact of a shifting load could lead to a derailment.

Existing paragraph (b) of § 229.73 specifies that the maximum variation in the diameter between any two wheel sets on different trucks on a locomotive that has three-powered-axle trucks may not exceed 1 1/4 inches. FRA proposes to separate the existing requirement in current paragraph (b) into new paragraphs (b)(1)(i) and (b)(1)(ii), generally continuing the current 1 1/4 inch maximum variation for wheel sets on older

¹ UP’s petition for rulemaking is available in Docket No. FRA-2025-0126 on <https://www.regulations.gov>.

locomotives equipped with DC traction motors. FRA proposes to add a new paragraph (b)(2)(i), generally allowing a 1 1/2 inch maximum variation for wheel sets on newer locomotives equipped with AC traction motors that utilize single axle control. Proposed new paragraph (b)(2)(ii) would eliminate the wheel set variation requirement of this section for wheel sets on non-powered axles on locomotives equipped with AC traction motors that utilize single axle control because FRA does not expect wheel variation to have a significant impact on truck dynamics in that case. FRA expects this proposal would better accommodate new technology and maintain current levels of safety.

III. Regulatory Impact and Notices

A. Executive Order (E.O.) 12866 (Regulatory Planning and Review) and DOT Regulatory Policies and Procedures

FRA has considered the impact of this proposed rule under E.O. 12866, Regulatory Planning and Review (58 FR 51735, Oct. 4, 1993), and DOT Order 2100.6B, Policies and Procedures for Rulemaking (Mar. 10, 2025). The Office of Information and Regulatory Affairs within the Office of Management and Budget (OMB) determined that this NPRM is not a significant regulatory action under section 3(f) of E.O. 12866. This proposed rule would amend FRA's locomotive safety regulations to expand the maximum permitted variation in diameter for wheel sets using alternating current technology.

FRA expects that this proposed rule would result in cost savings to the industry as it would increase a maximum threshold for certain locomotives under 49 CFR 229.73(b) due to innovations in traction motor control. This would, in turn, result in a reduction of locomotive out-of-service time and increased wheel life without impacting safety. The increased allowable variation would help reduce the regulatory burden on the railroad industry while maintaining proper truck dynamics.

B. E.O. 14192 (Unleashing Prosperity Through Deregulation)

E.O. 14192, Unleashing Prosperity Through Deregulation (90 FR 9065, Jan. 31, 2025), requires that for “each new [E.O. 14192 regulatory action] issued, at least ten prior regulations be identified for elimination.”² Implementation guidance for E.O. 14192 issued by OMB (Memorandum M-25-20, Mar. 26, 2025) defines two different types of E.O. 14192 actions: an E.O. 14192 deregulatory action, and an E.O. 14192 regulatory action.³

An E.O. 14192 deregulatory action is defined as “an action that has been finalized and has total costs less than zero.” This proposed rulemaking is expected to have total costs less than zero, and therefore it would be considered an E.O. 14192 deregulatory action upon issuance of a final rule. While FRA affirms that each amendment proposed in this NPRM has a cost that is negligible or “less than zero” consistent with E.O. 14192, FRA requests comment on the extent of the cost savings for the changes proposed in this NPRM.

C. Regulatory Flexibility Act and E.O. 13272

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996,⁴ requires Federal agencies to consider the effects of the regulatory action on small business and other small entities and to minimize any significant economic impact. Accordingly, DOT policy requires an analysis of the impact of all regulations on small entities, and mandates that agencies strive to lessen any adverse effects on these businesses. The term *small entities* comprises small businesses and not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000 (5 U.S.C. 601(6)).

² Executive Office of the President. *Executive Order 14192 of January 31, 2025. Unleashing Prosperity Through Deregulation.* 90 FR 9065–9067 (Feb. 6, 2025).

³ Executive Office of the President. Office of Management and Budget. Guidance Implementing Section 3 of Executive Order 14192, Titled “Unleashing Prosperity Through Deregulation.” Memorandum M-25-20. Mar. 26, 2025.

⁴ Pub. L. 104–121, 110 Stat. 857 (Mar. 29, 1996).

No regulatory flexibility analysis is required, however, if the head of an Agency or an appropriate designee certifies that the rule would not have a significant economic impact on a substantial number of small entities. This proposed rule would not preclude small entities from continuing existing practices that comply with part 229; it merely offers flexibilities that could result in cost savings if a small entity or other regulated entity chooses to utilize those flexibilities. By extending this regulatory relief, many regulated entities, including small entities, would experience a cost savings.

Consequently, FRA certifies that the proposed action would not have a significant economic impact on a substantial number of small entities.

In accordance with section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121, 110 Stat. 857), FRA wants to assist small entities in understanding this proposed rule so they can better evaluate its effects on themselves and participate in the rulemaking initiative. If the proposed rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

D. Paperwork Reduction Act

This proposed rule offers regulatory flexibilities, and it contains no new information collection requirements under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

E. Environmental Assessment

FRA has analyzed this rule for the purposes of the National Environmental Policy Act of 1969 (NEPA). In accordance with 42 U.S.C. 4336 and DOT NEPA Order 5610.1C, FRA has determined that this rule is categorically excluded pursuant to 23 CFR 771.118(c)(4), “[p]lanning and administrative activities that do not involve or lead directly to construction, such as: [p]romulgation of rules, regulations, and directives.”

This rulemaking is not anticipated to result in any environmental impacts, and there are no unusual or extraordinary circumstances present in connection with this rulemaking.

Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, FRA has determined this undertaking has no potential to affect historic properties. FRA has also determined that this rulemaking does not approve a project resulting in a use of a resource protected by Section 4(f).

F. Federalism Implications

This proposed rule would not have a substantial effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Thus, in accordance with E.O. 13132, “Federalism” (64 FR 43255, Aug. 10, 1999), preparation of a Federalism Assessment is not warranted.

G. Unfunded Mandates Reform Act of 1995

This proposed rule would not result in the expenditure, in the aggregate, of \$100,000,000 or more, adjusted for inflation, in any one year by State, local, or Indian Tribal governments, or the private sector. Thus, consistent with section 202 of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4, 2 U.S.C. 1532), FRA is not required to prepare a written statement detailing the effect of such an expenditure.

H. Energy Impact

E.O. 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use, 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare a Statement of Energy Effects for any “significant energy action.” FRA has evaluated this proposed rule in accordance with E.O. 13211 and determined that this proposed rule is not a “significant energy action” within the meaning of E.O. 13211.

I. E.O. 13175 (Tribal Consultation)

FRA has evaluated this proposed rule in accordance with the principles and

criteria contained in E.O. 13175, Consultation and Coordination with Indian Tribal Governments (Nov. 6, 2000). The proposed rule would not have a substantial direct effect on one or more Indian tribes, would not impose substantial direct compliance costs on Indian tribal governments, and would not preempt tribal laws. Therefore, the funding and consultation requirements of E.O. 13175 do not apply, and a tribal summary impact statement is not required.

J. International Trade Impact Assessment

The Trade Agreement Act of 1979⁵ prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. This rulemaking is purely domestic in nature and is not expected to affect trade opportunities for U.S. firms doing business overseas or for foreign firms doing business in the United States.

K. Privacy Act Statement

In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, to <https://www.regulations.gov>, as described in the system of records notice, DOT/ALL-14 FDMS, accessible through www.transportation.gov/privacy. To facilitate comment tracking and response, we encourage commenters to provide their name, or the name of their organization; however, submission of names is completely optional. Whether or not commenters identify themselves, all timely comments will be fully considered. If you wish to provide comments containing proprietary or confidential information, please contact the agency for alternate submission instructions.

⁵ 19 U.S.C. ch. 13.

L. Rulemaking Summary

As required by 5 U.S.C. 553(b)(4), a summary of this rule can be found at <https://www.regulations.gov>, Docket No. FRA-2025-0126, in the SUMMARY section of this proposed rule.

List of Subjects in 49 CFR Part 229

Penalties, Railroad safety, Reporting and recordkeeping requirements.

The Proposed Rule

For the reasons discussed in the preamble, FRA proposes to amend part 229 of chapter II, subtitle B of title 49, Code of Federal Regulations as follows:

PART 229—RAILROAD LOCOMOTIVE SAFETY STANDARDS

1. The authority citation for part 229 continues to read as follows:

Authority: 49 U.S.C. 20103, 20107, 20133, 20137–38, 20143, 20168, 20701–03, 21301–02, 21304; 28 U.S.C. 2461 note; and 49 CFR 1.89.

2. Amend § 229.73 by revising paragraph (b) to read as follows:

§ 229.73 Wheel sets.

* * * * *

(b) The maximum variation in the diameter between any two wheel sets (the average diameter of the two wheels on an axle) shall not exceed the following:

(1) For wheel sets on locomotives equipped with direct current traction motors:

(i) Within the same three-powered-axle truck, 3/4 inch, except that when shims are used at the journal box springs to compensate for wheel diameter variation, the maximum variation may not exceed 1 1/4 inches.

(ii) On different trucks on a locomotive that has three-powered-axle trucks, 1 1/4 inches.

(2) For wheel sets on locomotives equipped with alternating current traction motors that utilize individual truck or single axle control technology:

(i) Powered axles, 1 1/2 inches, with or without shims.

(ii) Non-powered axles in the middle of two powered axles, the restriction of 1 1/2 inches, with or without shims, does not apply.

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Issued in Washington, DC.

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