

STATE OF WISCONSIN  
Department of Safety and Professional Services

IN THE MATTER OF RULE-MAKING PROCEEDINGS BEFORE THE  
DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES

ORDER OF THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES  
ADOPTING RULES  
CLEARINGHOUSE RULE 15-016

ORDER

An order of the Department of Safety and Professional Services to amend SPS 361.03 (14) (a) and to create SPS 364.0502 (Note) relating to mechanical ventilation systems for minor repair garages.

Analysis prepared by the Department of Safety and Professional Services.

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ANALYSIS

**Statutes interpreted:** ss. 101.02 (1) and (15) (h) to (j); ss. 101.025 (1) and (4); and s. 227.11 (a)

**Statutory authority:** ss. 101.02 (1) and (15) (h) to (j); ss. 101.025 (1) and (4); and s. 227.11 (a)

**Explanation of agency authority:**

Under sections 101.02 (1) and (15) (h) to (j) of the Statutes, the Department is required to establish rules and prescribe safeguards for protecting the life, health, safety, and welfare of employees and frequenters of public buildings and places of employment. Under section 101.025 (1) of the Statutes, for any rule that requires intake of outside air for ventilation, the Department is required to specify minimum quantities of outside air which must be supplied based upon the type of occupancy, the number of occupants, any areas with toxic or unusual contaminants, and other pertinent criteria determined by the Department. The Department is also required to set standards where the mandatory intake of outside air may be waived when the owner has demonstrated that the resulting air quality is equivalent to that provided by outdoor ventilation. Under section 101.025 (4) of the Statutes, the Department is required to establish rules setting a maximum rate of leakage allowable from outside-air dampers when the dampers are closed, and

maintenance standards for ventilation systems in public buildings and places of employment existing since April 30,1980. The Department also has authority under section 227.11 (2) (a) of the Statutes to promulgate rules interpreting any statute that is enforced or administered by the Department, if the rule is considered necessary to effectuate the purpose of the statute.

**Related statute or rule:** None

**Plain language analysis:**

The 2009 International Mechanical Code (IMC) section 502.16 adopted by the Wisconsin Department of Safety and Professional Services requires a ventilation rate of one cubic foot per minute (cfm) per twelve cubic feet (ft<sup>3</sup>) of shop volume in repair garages servicing vehicles fueled by lighter than air fuels such as natural gas and hydrogen. Generally, the mechanical ventilation system must operate continuously with two exceptions. The air movement in the shop should be as uniform as possible from the floor to the ceiling with inlets uniformly arranged on exterior walls near floor level and outlets at the high point of the room on exterior walls or the roof. These IMC requirements intend to prevent the accumulation of lighter-than-air flammable and combustible gases inside repair garages. The requirements intend to prevent the accumulation of lighter-than-air flammable and combustible gases inside repair garages.

The proposed rules would exempt certain repair garages from the requirements of IMC section 502.16 through the adoption of section 2211.7 of the 2009 International Fire Code (IFC). Section 2211.7 includes an exemption for repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance requiring no open flame or welding. Throughout this rule we will refer to the garages exempted in section 2211.7 as minor repair garages. Because IMC 502.16 is controlled by and extracted from the IFC, and the IFC has a more specific requirement, the exception to the IFC would provide an exception to IMC 502.16.

**Summary of, and comparison with, existing or proposed federal regulation:**

An Internet-based search of the Code of Federal Regulations (CFR) found the following existing federal regulation relating to workplace ventilation, as covered in this update of chapters SPS 361 and 364:

29 CFR 1910.94 – Ventilation. This regulation in the federal Department of Labor contains their occupational safety and health standards relating to ventilation, but does not specifically address compressed natural gas.

An Internet-based search of the 2013 and 2014 issues to date of the Federal Register did not find any proposed regulations relating to mechanical ventilation systems as covered in this update of chapters SPS 361 and 364.

**Comparison with rules in adjacent states:**

**Illinois:** The Illinois Fire Marshal has adopted the National Fire Protection Agency 101: Life Safety Code, which requires mechanical ventilation for fuel dispensing areas (NFPA 30A 7.5.1, 7.5.2, 7.5.3, and 7.5.4). It only requires that gas detection systems be interlocked with an existing mechanical ventilation system for garages repairing LNG engine fuel systems (NFPA 30 A 7.4.7.2 and 7.4.6.3). The code has no specific requirements for CNG maintenance facilities.

The 2009 IMC and IFC have been adopted with limitations by various local governments in Illinois. Section 2211.7 of the IFC includes an exemption for repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance requiring no open flame or welding.

**Iowa:** The Iowa State Fire Marshal has adopted the 2009 International Fire Code including IFC 2211.7, under 661 IAC 201.2 (1). Section 2211.7 of the IFC includes an exemption for repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance requiring no open flame or welding.

**Michigan:** The 2009 IMC and IFC have been adopted with limitations by various local governments in Michigan. Section 2211.7 of the IFC includes an exemption for repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance requiring no open flame or welding.

**Minnesota:** The Minnesota Department of Labor and Industry has adopted the 2006 International Fire Code including IFC 2211.7 which includes an exemption for repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance requiring no open flame or welding (MN R 7511.0090).

### **Summary of factual data and analytical methodologies:**

The Department referenced the 2009 International Fire Code and will add section 2211.7 to the list of adopted IFC sections and chapters. The Department also considered the requirements in Wisconsin's neighboring states and in states with high consumption of natural gas for transportation. The Department estimated the costs of complying with the current rules for minor repair garage owners to determine their savings under the proposed rule change.

### **Analysis and supporting documents used to determine effect on small business or in preparation of economic impact analysis:**

The current rules which adopt IMC section 502.16 provide minimal benefit in terms of safety at minor repair garages. The proposed rule would adopt 2009 IFC section 2211.7 which consists of a similar and nearly identical provision for ventilation as IMC 502.16; however, it contains an exception for minor repair garages. The exception included in IFC 2211.7 implies that the activities performed on vehicles fueled by lighter than air

fuels at minor repair garages result in minimal additional fire hazard and that exempting these facilities does not compromise safety.

Several other states currently exempt minor repair garages through the adoption of IFC section 2211.7. Neighboring states Indiana, Iowa, and Minnesota have all adopted chapter 22 of the IFC without amendments to section 2211.7. California and New York, the two states with highest consumption of natural gas for transportation, have adopted IFC 2211.7. Similarly, IFC 2211.7 has been adopted by the largest localities in North Dakota and Texas, two other states with considerable consumption of natural gas for transportation.

Compliance with the current rules imposes significant costs on minor repair garage owners. Industry experts estimate that the upfront design and construction costs associated with upgrading a mechanical ventilation system to comply with IMC 502.16 at a small (four bay) garage approach roughly \$110,000. This estimate includes preliminary engineering and construction assessment and design costs, permitting, exhaust fans, a roof ladder, a gas detection system, shunt trip heaters, wall louvers for makeup air, an air handling unit, and construction management costs, when applicable. After installation the ventilation system additionally imposes substantial annual maintenance and operational costs. The proposed rule would save minor repair garage owners from these substantial costs.

Industry experts estimate that within the next five years up to 50 new CNG retail fueling locations could open in Wisconsin for a total of 70 stations in the state. Once a critical mass of CNG fueling stations is reached, fleet owners in Wisconsin metropolitan areas will find it more practical and profitable to adopt CNG vehicles necessitating an influx of possibly several hundreds of CNG compliant minor repair garages.

The rule was posted for public comment on the economic impact of the proposed rule, including how this proposed rule may affect businesses, local government units, and individuals, for a period of 14 days and received no comment.

#### **Fiscal Estimate and Economic Impact Analysis:**

The Fiscal Estimate and Economic Impact Analysis document is attached.

#### **Effect on small business:**

These proposed rules do have a positive economic impact on small businesses, as defined in s. 227.114 (1), Stats. and will be submitted to the Small Business Regulatory Review Board for a determination on whether the rules will have a significant economic impact on a substantial number of small businesses. The Department's Regulatory Review Coordinator may be contacted by email at [Eric.Esser@wisconsin.gov](mailto:Eric.Esser@wisconsin.gov), or by calling (608) 267-2435.

#### **Agency contact person:**

Katie Paff, Program and Policy Analyst, Department of Safety and Professional Services, Division of Policy Development, 1400 East Washington Avenue, Room 151, P.O. Box 8935, Madison, Wisconsin 53708; telephone 608-261-4472; email at Kathleen.Paff@wisconsin.gov.

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TEXT OF RULE

SECTION 1. SPS 361.03 (14) (a) is amended to read:

**SPS 361.03 (14) (a)** Design and construction-related requirements shall apply that are addressed in IFC section 102.6; IFC chapters 2 to 4; IFC sections 501 to 502 and 504 to 510; IFC sections 601 to 605 and 607 to 609; IFC chapters 7 and 8; IFC sections 901.1 to 901.4.2, 901.4.4 to 909.18.9, and 909.20 to 913; ~~and~~ IFC chapters 10 and 12 to 21; IFC section 2211.7, and IFC chapters 23 to 29, 31 to 33, 36, 37, and 39 to 47.

SECTION 2. SPS 364.0502 (Note) is created to read:

**SPS 364.0502 (Note)** Under s. SPS 361.03 (14) (a), IFC section 2211.7 exempts a natural-gas motor-vehicle repair garage from the requirements of IMC section 502.16 if no work is performed on the fuel system in the vehicles, and the work is also limited to exchanging parts and maintenance that does not include any open flame or welding.

SECTION 3. **EFFECTIVE DATE.** The rules adopted in this order shall take effect on the first day of the month following publication in the Wisconsin administrative register, pursuant to s. 227.22 (2) (intro.), Stats.

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(END OF TEXT OF RULE)

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