

DIRECTOR'S OFFICE

GENERAL INDUSTRY SAFETY STANDARDS

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These rules become effective immediately upon filing with the Secretary of State unless adopted under sections 33, 44, or 45a(6) of 1969 PA 306.

Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the director of the department of ~~consumer and industry services~~ **licensing and regulatory affairs** by sections 19 and 21 of 1974 PA 154, **MCL 408.1019 and 408.1021**, and Executive Reorganization Order Nos. 1996-2, ~~2003-18~~ **2003-1**, 2008-4, and 2011-4, MCL ~~408.1019, 408.1021~~, 445.2001, 445.2011, 445.2025, and 445.2030)

R 408.17403, R408.17404, R 408.17405, R 408.17411, R 408.17412, R 408.17415, R 408.17421, R 408.17422, R 408.17423, R 408.17424, R 408.17426, R 408.17431, R 408.17432, R 408.17433, R 408.17434, R 408.17435, R 408.17436, R 408.17437, R 408.17451, R 408.17461, and R 408.17463 of the Michigan Administrative Code are amended as follows:

PART 74. FIRE FIGHTING

R 408.17403. Definitions; A to M.

Rule 7403. (1) "Approved label" means a label or other identifying mark of a nationally recognized testing laboratory, such as underwriters laboratory, inc., or factory mutual research corporation, that maintains a periodic inspection of production of labeled equipment or materials and by whose labeling compliance with nationally recognized standards or tests to determine suitable usage in a specified manner is indicated.

(2) "Aerial apparatus" means a fire department vehicle which is equipped with a ~~hydraulically~~ **power** operated extension ladder or elevating platform used for rescue, ventilation, elevated master streams, and gaining access to upper levels and which carries ground ladders, tools, and other equipment.

(3) "Control" means the limitation of worker exposure to exhaust emissions to levels not exceeding applicable MIOSHA exposure limits.

(4) "Controlled process" means an arrangement of equipment to control exhaust emissions by means of any of the following:

(a) A point of source capture of exhaust emissions by a mechanical tailpipe exhaust ventilation system.

(b) A general mechanical exhaust ventilation system in a fire apparatus building bay or bays.

(c) A device that is permanently installed directly on the fire apparatus exhaust system.

(5) "Emergency operations" means a fire or nonfire incident, including, but not limited to, rescues, extrications, hazardous material release, and natural disasters, where fire department response can be anticipated and which subject fire personnel to personal injury or hazards. Vegetative cover fires are not included in this definition.

(6) "Exhaust emissions" means exhaust by-products of combustion, from internal combustion engines, capable of causing occupational illness or disease to a person.

(7) "Fire apparatus" means mobile fire fighting equipment such as, but not limited to, a pumper/engine, aerial apparatus, a tanker/tender, or any other similar equipment that has fire suppression or rescue as its primary use. A vehicle not designed, equipped, or utilized for emergency ~~fire fighting~~ **operations** is not fire apparatus.

(8) "Fire station" means a structure in which fire service equipment is housed and employees may be quartered.

(9) "Fire service personnel" means all employees who are engaged in fire suppression, fire inspection, or fire investigation or who are subjected to the hazards of emergency operations.

(10) "Head protection" means a fire fighter's helmet and hood.

(11) "Ladder pipe" means a large capacity water delivery device attached to an aerial ladder.

~~(12) "Lower control station" means a work station where the operator of apparatus that has an elevating platform is stationed.~~

~~(13)~~ **(12)** "Municipal" means any public entity.

R 408.17404. Definitions; O to V.

Rule 7404. (1) "Operator's control station" means a work station where the operator of apparatus, such as an aerial ladder or pumper, is stationed.

(2) "Personal alert safety systems (PASS)" means a device that is certified as being in compliance with these rules, that senses movement or lack of movement, and that automatically activates an audible alarm signal (which can also be manually activated to alert and to assist others in locating a fire fighter or emergency services person who is in danger).

- (3) "Platform control station" means a work station where the rider of an elevating platform is stationed.
- (4) "Positive-pressure breathing apparatus" means a self-contained breathing apparatus in which the pressure in the breathing zone is positive in relation to the immediate environment during inhalation and exhalation.
- (5) **"Primary control station" means a work station where the operator of apparatus that has an aerial ladder or platform is stationed.**
- ~~(5)~~ **(6)** "Protective ensemble" means multiple elements of clothing and equipment designed to provide a degree of protection for ~~fire fighters~~ **fire service personnel** from adverse exposures to the inherent risks of structural fire fighting operations and ~~certain~~ other emergency operations. ~~The elements of the protective ensemble are coats, trousers, coveralls, head protection, gloves, footwear, and interface components.~~
- ~~(6)~~ **(7)** "Roof ladder" means a ladder equipped with folding hooks. The hooks provide a means of anchoring the ladder to the roof ridge or other roof part.
- ~~(7)~~ **(8)** "Stay poles" ~~some times also called tormenters;~~ **means mean** poles attached to the rails of the long extension ladders to aid in the raising and supporting of the ladder.
- ~~(8)~~ **(9)** "Structural fire fighting" means activities of rescue, fire suppression, and property conservation in buildings, enclosed structures, aircraft, vehicles, vessels, or like properties that are involved in a fire or emergency situation.
- ~~(9)~~ **(10)** "Training" means the process of making ~~fire fighters~~ **fire service personnel** proficient through instruction ~~and~~ **or** hands-on practice, ~~or both~~, in the operation and care of equipment that is expected to be used and in the performance of assigned duties.
- ~~(10)~~ **(11)** "Volunteer" means a person who is permitted to work as, and who is trained as, a member of an organized fire department.

R 408.17405. ~~Adoption by reference of standards~~ **Adopted and referenced standards.**

Rule 7405. (1) The following National Fire Protection Association standards are adopted by reference in these rules and are available from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, Massachusetts, 02269-9101, or via the internet at web-site: WWW.NFPA.ORG, at a cost as of the time of adoption of these amendments, as stated in subdivisions (a) to (e) of this subrule., ~~or for review and purchase at the Michigan Department of Consumer and Industry Services, MIOSHA Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143:~~

- (a) NFPA 1901: standard for "Automotive Fire Apparatus," ~~4999~~ **2009** edition. Cost: ~~\$32.00~~ **\$50.50**.
- (b) NFPA 1983: standard on "Fire Service Life Safety Rope and System Components," 1995 edition. Cost: ~~\$24.25~~ **\$27.00**.
- (c) NFPA 1971: standard on "Protective Ensemble for Structural Fire Fighting," ~~2000~~ **2007** edition. Cost: ~~\$27.00~~ **\$48.50**.
- (d) NFPA 1981: standard on "Open Circuit Self-contained Breathing Apparatus for Fire Fighter," 1997 edition. Cost: ~~\$24.25~~ **\$43.00**.
- (e) NFPA 1982: standard on "Personal Alert Safety System (PASS) for Fire Fighters," 1998 edition. Cost: ~~\$24.25~~ **\$39.00**.

(2) Copies of the standards adopted in subrule (1) of this rule may be obtained from the publisher or may also be obtained from the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan , 48909-8143, at the cost changed in subrule (1) of this rule plus \$20.00 for shipping and handling.

~~(2)~~ **(3)** The following Occupational Safety and Health Administrative standards as referenced in these rules. **Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at website: www.michigan.gov/mioshastandards. For quantities greater than 5, the cost, as of the time of adoption of these rules, is 4 cents per page.** ~~are available for inspection or distribution to the public at the offices of the Michigan Department of Consumer and Industry Services, MIOSHA Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909, or via the Internet at web-site: WWW.CIS.STATE.MI.US/BSR/DIVISIONS/STD:~~

- ~~(a) General industry safety standard Part 72. "Automotive Service Operations," being R 408.17201 et seq. of the Michigan Administrative Code.~~
- ~~(a)~~ **(b)** General industry safety standard **part 4** ~~Part 4.~~ "Portable Ladders," **R 408.10401 to R 408.10456.** ~~being R 408.10401 et seq. of the Michigan Administrative Code.~~
- ~~(b)~~ **(c)** General industry safety standard **part 33** ~~Part 33.~~ "Personal Protective Equipment," **R 408.13301 to R 408.13398** ~~being R 408.13301 et seq. of the Michigan Administrative Code.~~
- ~~(c)~~ **(d)** General industry safety standard **part 72** "Automotive Service Operations," **R 408.17201 to R 408.17253.**
- ~~(d) Occupational health standard Part 451. "Respiratory Protection" being R 325.60051, et seq. of the Michigan Administrative Code.~~
- ~~(d)~~ **(e)** Occupational health standard **part 380** ~~Part 380.~~ "Noise Exposure and Hearing Conservation" **R 325.60101 to R 325.60128.** ~~being R 325.60101 et seq. of the Michigan Administrative Code.~~
- ~~(e)~~ **(f)** Occupational health standard **part 451** ~~Part 451.~~ "Respiratory Protection" **R 325.60051 to R 325.60052.** ~~being R 325.60051, et seq. of the Michigan Administrative Code.~~
- (f) Occupational health standard part 472 "Medical Services and First Aid" R 325.47201.**

R 408.17411. Duties of employer.

Rule 7411. (1) An employer shall comply with all of the following requirements:

(a) Provide **initial and continuing** training to an employee commensurate with **and specific to** the duties and functions that the employee is expected to perform. The training shall be provided before the employee is permitted to perform emergency operations.

(b) Assure that prospective fire service personnel are physically fit and have the ability to perform assigned emergency operations.

(c) Assure that job-required equipment and tools are maintained free of recognized defects that could cause an injury.

(d) Develop a basic procedure that covers the treatment and transport of injured employees from the emergency scene to a medical facility.

(e) Provide in the workplace first aid supplies/kits appropriate for the hazard history, to minimally ~~meet recommendations as prescribed in the provisions~~ **comply with the requirements** of the occupational health standard Part 472 "**Medical Services and First Aid,**" ~~as referenced in R 408.17405. "Medical Services and First Aid." This standard is available at the Michigan Department of Consumer and Industry Services, MIOSHA Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909, or web-site: WWW.CIS.STATE.MI.US/BSR/DIVISIONS/STD.~~

(f) Comply with the requirements of this part, **review with, and make available a copy of this part for employees.**

(2) An employer shall prepare and maintain a statement or written policy which establishes its basic organizational structure and which establishes the type, amount, ~~and~~ frequency of training to be provided to fire service personnel, **and maintain training records.** The organizational statement **and training records** shall be available for inspection by the director of the department of **licensing and regulatory affairs** ~~consumer and industry services~~ or his or her authorized representative and by an employee or his or her authorized representative.

R 408.17412. Duties of employee.

Rule 7412. An employee shall **do all of the following:**

(a) Use personal protective equipment as prescribed by this part.

(b) Report defective equipment, tools, and hazardous conditions to a supervisor.

(c) Not remove safeguards from equipment except when necessary to service. The safeguard or equivalent shall be replaced before returning the equipment to operation.

(d) Not use equipment and tools unless trained in their use and authorized to do so.

(e) Only perform those duties that he or she is trained to do.

R 408.17415. Fire station safety.

Rule 7415. (1) The area within 3 feet of the slide pole on all sides shall be maintained free of any obstruction. A floor-to-ceiling wall shall not be construed to be an obstruction.

(2) A cushioned mat, not less than 3 feet in diameter, ~~shall should~~ be located around the base of the slide pole at all times.

(3) A dormitory and any means of egress from the dormitory, apparatus bay, and aiseways shall be equipped with an emergency lighting system which shall be automatically activated in case of power failure. The system may be operated by battery or generator.

(4) Switches and electrical equipment located in the shower or other areas subject to hazards created by moisture shall be approved for the location or removed to a nonhazardous area.

(5) All sleeping quarters shall be equipped with ~~a~~ **an operational** smoke detection device and **an operational** carbon monoxide detection device.

(6) All new construction or significantly remodeled facilities (50% or more area) that house fire apparatus shall install a controlled process exhaust ventilation system that will effectively control exhaust emissions created by the fire apparatus and will assure that employee exposures to the exhaust emissions do not exceed applicable MIOSHA exposure limits. If a general mechanical exhaust ventilation system is utilized, then a mechanical air supply system shall be provided if its absence will result in building negative pressures sufficient to cause back drafting of vents from fuel-fired equipment.

~~(7) This rule is effective for all new or remodeled facility construction 18 months after the effective date of these rules.~~

~~(8)~~ **(7)** All equipment used for the control of exhaust emissions from fire apparatus shall be used, inspected, and maintained in accordance with the manufacturer's recommendations.

CONSTRUCTION AND USE OF EQUIPMENT

R 408.17421. Fire apparatus generally.

Rule 7421. (1) Fire apparatus shall be able to stop within 30 feet after application of the brakes at 20 miles per hour.

(2) Fire apparatus shall be equipped with all of the following items:

(a) Windshield wipers.

(b) Head, tail, stop, and backup lights and a backup alarm.

(c) Horn and siren.

(d) Slip-resistant steps, ~~tallboard~~ **tailboard**, and work platforms.

(e) Seat belts for all seated employees. Seat belts shall be used while the apparatus is in motion.

(f) If an employee is allowed by the employer to ride the apparatus in an unseated position while the apparatus is in motion, then the employer shall provide for, and enforce the use of, a safety harness.

(3) New fire apparatus that is manufactured and purchased after the effective date of these ~~amendatory~~ rules shall ~~meet the applicable~~ **comply with the** requirements of the national fire protection association standard NFPA 1901: standard for "Automotive Fire Apparatus," ~~1999~~ **2009** edition, which is adopted by reference in R 408.17405.

(4) Fire apparatus using a ~~tiller~~ **tiller person** or other employees riding on the apparatus remote from the cab shall be equipped with a voice communication system or audible signal system at each location of an operating employee. When the audible system is used, all of the following signals shall be in effect:

- (a) One long blast means stop.
- (b) Two short blasts mean forward.
- (c) Three short blasts mean reverse.

(5) ~~Except on instructions of a designated signalperson, An~~ **operator of fire apparatus shall not move the equipment when his or her vision is obstructed, except on instructions of a designated signalperson.**

(6) A minimum distance of 10 feet from **unprotected** energized equipment or high-voltage transmission lines, as distinguished from low voltage secondary lines and series streetlight construction, shall be maintained when using fire apparatus ~~equipped with elevating platforms, aerial ladders, or snorkels~~. The training of fire service personnel shall include development of the ability to recognize and identify primary, high-voltage transmission lines and series street lighting construction.

R 408.17422. Fire apparatus tires and rims.

Rule 7422. (1) A thorough visual inspection of the tread and sidewall areas of fire apparatus tires for cuts, cracks, splits, or bruises, including a tread depth measurement, shall be made at least annually. A record of this inspection shall be maintained for a minimum of 10 years.

(2) A tire shall be replaced if 1 of the following occurs:

- (a) The average tread depth is worn to 5/32 of an inch or less.
- (b) The tread depth at any 1 location is 2/32 of an inch, or less.
- (c) A cut or crack exposes the cord fabric.

(3) A replacement tire shall meet or exceed the standards of the original tire furnished with the apparatus.

(4) Fire apparatus tires and rims shall be inspected inside at least once every 10 years.

(5) All breakdown of fire apparatus tires shall comply with ~~the provisions of the general industry safety standard Part 72 "Automotive Service Operations," as referenced in R 408.17405. , Part 72. Automotive Service Operations, being R 408.17201 et seq. of the Michigan Administrative Code.~~

R 408.17423. Fire apparatus with elevating platforms.

Rule 7423. (1) When an aerial apparatus **platform is elevated** used, parking brakes shall be set and stabilizing jacks or outriggers and safety locks shall be used. When needed, ground plates shall be used under the jack or outriggers.

(2) An instructional information plate, which is clearly visible to the operator, shall be located at the operator's control station. If the aerial is equipped with a platform, then a plate shall also be located at the platform control station. The plate shall contain all of the following information:

- (a) Rated capacity of the aerial tip or platform.
- (b) Operating controls identified for motion.
- (c) Cautions or restrictions of operation.

(3) An operator shall comply with all of the following provisions:

- (a) Remain at the primary control station when the aerial ladder or platform is occupied.
- (b) Not move the apparatus unless the ladder or platform is in the bed of the apparatus.

(c) Maintain **clearances** ~~a minimum distance of 10 feet from energized equipment or high-voltage lines as prescribed~~ **required** in R 408.17421(6).

R 408.17424. Aerial apparatus.

Rule 7424. (1) An aerial apparatus that is equipped with a ladder shall not have the ladder extended or retracted when an employee is positioned on the ladder.

(2) While working from an aerial apparatus, an employee shall be secured with a safety belt system as referenced in the national fire protection association standard NFPA 1983: standard on "Fire Service Life Safety Rope and System Components," 1995 edition which is adopted by reference in R 408.17405.

(3) The tip of the aerial ladder shall not be forcefully extended against a solid object or used to support the ladder.

(4) The steps and rungs of an aerial apparatus shall have a slip-resistant surface.

(5) Jacks, outriggers, and safety locks shall be used as ~~prescribed~~ **required** in R 408.17423(1).

(6) The rated capacity for an aerial apparatus shall not be exceeded.

(7) The operator of an aerial ladder shall comply with all of the following provisions:

(a) Remain at the ~~turntable~~ **primary control station** when the ladder is occupied.

(b) Communicate to occupant of ladder prior to movement.

~~(b)~~ **(c) Not move the apparatus unless the ladder is in the bed.**

(8) The operator of an aerial ladder shall maintain **clearances** a minimum distance of 10 feet from energized equipment or high-voltage lines, as prescribed **required** in R 408.17421(6).

(9) The controls for the operation of an aerial apparatus shall be of a type that returns to a neutral position when released.

(10) Tools or equipment shall not be mounted or installed on the turntable.

(11) A 2-way voice communication system shall be provided between the employee on the raised portion of the equipment and the operator control station.

~~(12) Only the operator shall manually rotate the ladder when it is occupied by an employee.~~

~~(13) (12)~~ Detachable ladder pipes shall be operated in the direction the ladder is facing.

~~(14) (13)~~ Ladder pipes shall be secured to the ladder so that the pipe cannot be accidentally dislodged while in operation.

~~(15) (14)~~ An employer shall follow the manufacturer's instructions and recommendations for the use, testing, and maintenance of aerial apparatus.

R 408.17426. Portable ladders.

Rule 7426. (1) Except as otherwise ~~prescribed~~ **required** by these rules, a portable ladder shall be constructed, used, and maintained ~~as prescribed in the~~ **to comply with** general industry safety standard **Part 4 "Portable Ladders," as referenced in R 408.17405.** ~~, Part 4. Portable Ladders, being R 408.10401 et seq. of the Michigan Administrative Code.~~

(2) The rung spacing shall be not less than 12 inches nor more than 16 inches.

(3) The rungs of a metal ladder shall have a slip-resistant surface.

(4) A roof ladder assembly shall be capable of supporting a direct load of not less than 500 pounds.

(5) Stay poles or tormentors shall be furnished on any wood ladder that extends more than 36 feet. The spikes on stay poles shall not project beyond the end of the ladder when nested. The locking pins on stay poles shall be securely attached to the ladders.

(6) Portable ladders which are **mounted** more than 4 feet in height and less than 7 feet in height, ~~which are mounted to the side of~~ **on** a fire apparatus, and which have ends that extend beyond the ladder's mounting surface or compartment shall be protected from contact.

PERSONAL PROTECTIVE EQUIPMENT

R 408.17431. Personal protective equipment.

Rule 7431. (1) An employer shall assure that all emergency service personnel use personal protective equipment appropriate for the exposure involved when performing emergency operations.

(2) Personal protective equipment shall be provided by the employer at no cost to the employee and shall comply with the requirements of this part.

~~(3) Equipment that is ordered or purchased after the effective date of this amendatory rule shall be in compliance with the requirements of this part.~~

~~(4) (3)~~ An employer shall assure that personal protective equipment protects the head, body, and extremities and consists of at least all of the following components:

(a) Foot and leg protection.

(b) Hand protection.

(c) Body protection.

(d) Face, eye, and head protection.

~~(5) (4)~~ Personal protective equipment that is required by these rules to comply with the requirements of a nationally recognized standard shall either bear an approved label of, or be certified in writing by, the manufacturer as being in compliance with the applicable standard.

~~(6) (5)~~ Head protection and eye protection shall be provided for, and used by, persons who ride in cabs or tiller seats that are not enclosed.

~~(7) (6)~~ Personal protective equipment that is used by more than 1 employee shall be cleaned or sanitized before reassignment.

~~(8) (7)~~ Personal protective equipment shall be inspected by the user after each use.

~~(9) (8)~~ An employer shall implement procedures for inspecting and servicing personal protective equipment, particularly following fires or other emergency usage. The procedures employed for such servicing, such as product washing or other cleaning, shall comply with the manufacturer's recommendations.

~~(10) (9)~~ An employer shall implement a procedure for determining whether personal protective equipment shall be repaired or replaced. All repairs shall be made in compliance with the manufacturer's recommendations.

~~(11) (10)~~ Respiratory equipment devices shall be inspected by the user after each use. Malfunctioning or damaged components or units shall be repaired by the manufacturer or a person who is certified by the manufacturer or shall be replaced.

R 408.17432. Protective clothing for emergency operations.

Rule 7432. ~~(1)~~An employer shall provide both protective coats and protective trousers, or a protective coverall to all employees who engage in or are exposed to fire hazards of emergency operations. The protective coat, trouser, and coverall shall meet the applicable requirements of the national fire protection association standard NFPA 1971: standard on "Protective Ensemble for Structural Fire Fighting," ~~2000~~ **2007** edition, which is adopted by reference in R 408.17405.

R 408.17433. Head, eye, and face protection.

Rule 7433. (1) An employer shall do all of the following:

(a) Provide primary head, face, and eye protection appropriate for a given specific hazard to all employees exposed, or potentially exposed, to the specific hazard. An employer shall assess potential emergency operation scenes to determine what hazards requiring head, face, and eye protection are present, or likely to be present, and match the protective device to the particular hazard. An employer shall have and implement written operational procedures specific to the type of hazard to which an employee may be exposed.

(b) Maintain head, face, and eye protection in a location of readiness for immediate response to structural fires or other emergency operations.

(c) Ensure that protective eye and face devices that comply with the provisions of the general industry safety standard Part 33- "Personal Protective Equipment," as referenced in R 408.17405 ~~being R 408.13301 et seq. of the Michigan Administrative Code,~~ are used by emergency service personnel when performing operations where the hazards of flying or falling materials that might cause eye and face injuries are present.

~~(2) An employee who is engaged in structural fire fighting shall utilize the face protection provided by the helmet face shield, or the breathing apparatus face piece with helmet, while engaged in structural fire fighting operations.~~ **While conducting emergency operations, the requirement of face and eye protection shall be met by helmet face shield, if equipped, and primary eye protection, or breathing apparatus face piece, or primary eye protection and secondary means of face protection.** An employer shall provide helmets to all employees who engage in or are exposed to the hazards of structural fire fighting. The helmets shall meet the requirements of the national fire protection standard NFPA 1971: standard on "Protective Ensemble for Structural Fire Fighting," ~~2000~~ **2007** edition, which is adopted by reference in R 408.17405.

(3) An employer shall provide protective hoods to all employees who engage in or are exposed to fire hazards of emergency operations. The protective hoods shall meet the applicable requirements of the national fire protection association standard NFPA 1971: standard on "Protective Ensemble for Structural Fire Fighting," ~~2000~~ **2007** edition, which is adopted by reference in R 408.17405.

R 408.17434. Foot and leg protection.

Rule 7434. An employer shall provide foot and leg protection to all employees who engage in or are exposed to the hazards of emergency operations. The foot and leg protection shall meet the applicable requirements of the national fire protection association standard NFPA 1971: standard on "Protective Ensemble for Structural Fire Fighting," ~~2000~~ **2007** edition, which is adopted by reference in R 408.17405.

R 408.17435. Hand protection.

Rule 7435. An employer shall provide hand protection to all employees who engage in or are exposed to the hazards of emergency operations. The hand protection shall meet the applicable requirements of the national fire protection association standard NFPA 1971: standard on "Protective Ensemble for Structural Fire Fighting," ~~2000~~ **2007** edition, which is adopted by reference in R 408.17405.

R 408.17436. Respirator protection devices.

Rule 7436. (1) An employer shall have a written respiratory protection program to address the safe use of respirators in dangerous atmospheres that may be encountered in emergency operations, ~~in accordance with the provisions by that~~ **complies with** the occupational health standard Part 451- "Respiratory Protection," **as referenced in R 408.17405.** ~~being R 325.60051 et seq. of the Michigan Administrative Code.~~

(2) An employer shall assure that self-contained breathing apparatus for use by fire service personnel is of the positive pressure type. All breathing apparatus that is purchased after the effective date of these ~~amendatory~~ rules shall ~~be in compliance~~ **comply** with the national fire protection association standard NFPA 1981: standard on "Open Circuit ~~Self-contained~~ **Self-Contained** Breathing Apparatus for Fire Fighters," 1997 edition, which is adopted by reference in R 408.17405.

(3) Subrule (2) of this rule does not prohibit the use of a self-contained breathing apparatus where the apparatus can be switched from a demand mode to a positive-pressure mode when an employee is performing emergency operations.

R 408.17437. Hearing protection.

Rule 7437. An employer shall comply with ~~the provisions of the~~ occupational health standard Part 380- "Noise Exposure and Hearing Conservation," **as referenced in R 408.17405.** ~~being R 325.60101 et seq. of the Michigan Administrative Code.~~

OPERATIONS

R 408.17451. ~~Supervision~~ **Management** of emergency operations.

Rule 7451. (1) Each fire department shall establish and implement written procedures for emergency operations. The written procedures shall include all of the following:

- (a) A requirement that a nationally recognized incident management system be implemented at each emergency.
 - (b) A requirement that a personnel accountability system be implemented at each emergency.
 - (c) A statement that the procedures apply to all employees who are operating at the emergency.
 - (d) A requirement for initial training and annual refresher training in emergency operations and the incident management system.
 - (e) A requirement that the procedures shall ~~be in accordance~~ **comply** with the "two in/two out" rules as found in ~~the provisions of 1910.134(g)(4), which was adopted by reference in the occupational health standard Part 451--"Respiratory Protection," as referenced in R 408.17405. being R 325.60051 et seq. of the Michigan Administrative Code.~~
- (2) A trained employee shall function as the incident commander at each emergency.

INSPECTIONS

R 408.17461. Inspection of fire apparatus and equipment; record of repair or replacement; lifeline guns and explosive devices; apparatus and equipment involved in accident; equipment testing.

Rule 7461. (1) All of the following items of the fire apparatus, if so equipped, shall be inspected for proper operation and for defects at least once a month:

- (a) Windshield washers and wipers.
- (b) Defroster and heater.
- (c) Head, tail, stop, backup, and flasher lights.
- (d) Backup alarm.
- (e) Horn and siren.
- (f) Slip-resistant steps and platforms.
- (g) Tires, rims, and suspension system.
- (h) Steering mechanism.
- (i) Braking system.
- (j) Operational controls.

Inspection records shall be maintained **for a minimum period of 24 months** for the apparatus.

- (2) Records of repair or replacement shall be maintained for the life of the apparatus.
- (3) Lifeline guns and explosive devices shall be cleaned and made ready for operation after each use.
- (4) Apparatus and equipment involved in an accident shall be inspected by a licensed mechanic and tested before subsequent use.
- (5) All portable equipment ~~that is~~ carried on a fire apparatus shall be inspected for operation and for defects at least monthly and within 24 hours after any use. Inspection records shall be maintained **for a minimum period of 24 months** for portable equipment.
- (6) All equipment ~~which is~~ carried on fire apparatus or ~~which is~~ designated for training shall be tested at least annually in accordance with manufacturers' instructions and applicable standards.
- (7) Fire fighting apparatus and equipment ~~that is~~ found to be defective or in unserviceable condition shall be removed from service or repaired or replaced.

R 408.17463. **General utility ropes, Life life** safety ropes, harnesses, and hardware.

Rule 7463. (1) All life safety ropes, harnesses, and hardware used by employees shall meet the requirements of the national fire protection association standard NFPA 1983: standard on "Fire Service Life Safety Rope and System Components," 1995 edition, which is adopted by reference in R 408.17405.

(2) During fall arrest or repelling operations, an employee shall ensure that life safety harnesses are used as specified in the national fire protection association standard NFPA 1983: standard on "Fire Service Life Safety Rope and System Components," 1995 edition, which is adopted by reference in R 408.17405.

- (3) **Natural Fiber fiber** ropes shall be inspected visually after each use for all the following conditions:
 - (a) Externally for abrasions, cut or broken fibers, decay, burns, lack of strength, softness, variation in size or roundness of the strands, and for mildew or mold.
 - (b) Internally annually, by separating the strands at 3-foot intervals, for broken fibers, presence of grit, mildew or mold, color change of the fibers, or powdering and short, loose fibers.
- (4) A **natural** fiber rope that has any of the conditions described in subrule ~~(2)~~ **(3)**(a) and (b) of this rule shall be replaced or repaired.
- (5) Synthetic rope shall be inspected visually after each use for all of the following conditions:
 - (a) Abrasions.
 - (b) Cut or broken fibers.

- (c) Burns.
- (d) Melted fibers.
- (e) Variations in the size or roundness of the strands.
- (6) A synthetic rope that has any of the conditions specified in subrule (5) of this rule shall be replaced or returned to the manufacturer for repair.

Appendix A

Training Reference

The following appendix is a guideline listing mandatory and non-mandatory training provisions from a number of state requirements and is intended to assist employers and employees in complying with these requirements.

JOB DUTY	LINE PERSONNEL			COMMAND PERSONNEL		
	FIRE FIGHTER (FULL-TIME)	FIRE FIGHTER (PART-TIME; FOR PAY OR VOLUNTEER)	APPARATUS DRIVER/OPERATOR	COMPANY OFFICER	SUPERVISORY OFFICER	ADMINISTRATIVE OFFICER
TRAINING / REFERENCE						
Personal Protective Equipment – MIOSHA OH Part 33 and MIOSHA GI Part 74						
Initial Training: Provide basic training for understanding, knowledge, and skills	X	X	X	X	X	X
Continuing Education: As often as necessary	X	X	X	X	X	X
Respiratory Protection - MIOSHA OH Part 451 and MIOSHA GI Part 74						
Initial Training: Evaluation required to ensure safe usage	X	X	X	X	X	X
Continuing Training: At least annually	X	X	X	X	X	X
Hazardous Waste Operations and Emergency Response – MIOSHA OH Part 432						
Initial Training: 24 hours	X	X	X	X	X	X
Annual Training: As required to maintain competency	X	X	X	X	X	X
Bloodborne Infectious Diseases - MIOSHA OH Part 554						
Initial Training: As required	X	X	X	X	X	X
Annual Training: As required	X	X	X	X	X	X
Fire Fighter I - 1966 Public Act 291 29.369 (6)						
Initial Training: 152 hours	X	X	X	X	X	X
Fire Fighter II - 1966 Public Act 291 29.369 (5)						
Initial Training: 75 hours	X			X	X	X
Federal OSHA Respiratory Protection Standard, 29 CFR 1910.134(g)(4) and 29 CFR 1910.155(c)(26):Two-in/Two-out Rule						
Initial Training: As required	X	X	X	X	X	X
Annual Training: As required	X	X	X	X	X	X
Fire Fighting – MIOSHA GI Part 74, Rule 408.17411						
Initial Training: Fire Fighter I / Fire Fighter II	X	X	X	X	X	X

	LINE PERSONNEL				COMMAND PERSONNEL		
	FIRE FIGHTER (FULL-TIME)	FIRE FIGHTER (PART-TIME; FOR PAY OR VOLUNTEER)	APPARATUS DRIVER/OPERATOR		COMPANY OFFICER	SUPERVISORY OFFICER	ADMINISTRATIVE OFFICER
TRAINING / REFERENCE	<u>JOB DUTY</u>						
Continued training to cover all expected duties on a 3 year cycle, unless otherwise specified	X	X	X		X	X	X
MFFTC Drivers Training - ACT 300 of 1949 and Act 346							
Initial Training: 6 hrs. + practical road test + 10 hrs. supervised driving			X		X	X	X
Annual Training: As needed to maintain competency			X		X	X	X
NIMS IS 700							
Initial Training: 3 hours	X	X	X		X	X	X
NIMS IS 800							
Initial Training: 3 hours	X	X	X		X	X	X
NIMS 300							
Initial Training: 24 hours					X	X	X
NIMS 400							
Initial Training: 20 hours						X	X
NIMS ICS for the Fire Service							
Initial Training: 16 hours.	X	X	X		X	X	X
Annual Training: As required to maintain competency	X	X	X		X	X	X
MFFTC Company Officer I and II Program							
Initial Training: As required and prerequisites					X	X	X
Annual Training: As needed					X	X	X
MFFTC Fire Officer III Program							
Initial Training: As required						X	X
Annual Training: As needed						X	X
MFFTC Fire Officer IV Program							
Initial Training: As adopted							X
Annual Training: As adopted							X
Recognition of High Voltage							
Initial Training: As necessary	X	X	X		X	X	X
Annual Training: Yes	X	X	X		X	X	X
Review of NFPA Safety Standards - NFPA 1500							
Initial Training: As necessary for safety						X	X
Annual Training: As necessary for safety						X	X

	LINE PERSONNEL			COMMAND PERSONNEL		
	FIRE FIGHTER (FULL-TIME)	FIRE FIGHTER (PART-TIME; FOR PAY OR VOLUNTEER)	APPARATUS DRIVER/OPERATOR	COMPANY OFFICER	SUPERVISORY OFFICER	ADMINISTRATIVE OFFICER
TRAINING / REFERENCE						
Michigan Fire Prevention Code - Public Act 207 of 1941						
Initial Training: General review					X	X
Annual Training: General review					X	X
Permit-Required Confined Spaces – MIOSHA GI Part 90						
Initial Training: Provide basic training for understanding, knowledge, skills and locations	X	X	X	X	X	X
Annual Training: As needed	X	X	X	X	X	X
Review of MIOSHA General Industry Safety Part 74						
Initial Training: Knowledge and review	X	X	X	X	X	X
Annual Training: As needed	X	X	X	X	X	X
Hazard Materials Site Specific Response Plan - Hazwoper 1910.120, PA 154, Sara Title III						
Initial Training: If applicable, on all sites	X	X	X	X	X	X
Annual Training: As required	X	X	X	X	X	X
Terrorism Awareness						
Initial Training: 4 hours	X	X	X	X	X	X
Annual Training: As needed	X	X	X	X	X	X
Hazard Communication – MIOSHA OH Part 430 - Employee Right to Know						
Initial Training: As required	X	X	X	X	X	X
Annual Training: As needed	X	X	X	X	X	X
Hazard Communication – MIOSHA OH Part 430 - Fire Fighter Right to Know						
Initial Training: As required – See Fire Marshal Bulletin 9	X	X	X	X	X	X
Annual Training: As needed	X	X	X	X	X	X
CPR and AED						
Initial Training: As required	X	X	X	X	X	X
Annual Training: As needed for recertification	X	X	X	X	X	X

Job Duties Defined:

Fire Fighter (Full-Time) – An individual who is a career fire fighter.

Fire Fighter (Part-Time; For Pay or Volunteer) – An individual who is not a career fire fighter.

Apparatus Driver/Operator – An individual who drives, operates, or both emergency apparatus.

Company Officer – is a supervisor of a crew or company of personnel.

Supervisory Officer – is responsible for assuming command to allow company officers to directly supervise personnel.

Administrative Officer – this duty involves general administrative functions and the development, implementation, or both, of departmental policies and procedures.