

NFPA® 99-Proposed 2015 Edition

Health Care Facilities Code

TIA Log No. 1115

Reference: 5.1.3.6.3.9(C), 5.1.3.7.5.3, 5.1.3.8.4.3, and 5.1.13.3.5.13(3)

Comment Closing Date: May 16, 2014

Submitters: Anthony Lowe, Allied Hospital Systems

1. Revise text to read as follows:

5.1.3.6.3.10 Electrical Power and Control

(A) An additional compressor(s) shall automatically activate when the compressor(s) in operation is incapable of maintaining the required pressure.

(B) Automatic or manual alternation of compressors shall allow division of operating time. If automatic alternation of compressors is not provided, the facility staff shall arrange a schedule for manual alternation.

(C) Each compressor motor shall be provided with electrical components including, but not limited to, the following:

(1) Dedicated disconnect switch installed in the electrical circuit ahead of each motor starter

(2) Motor starting device

(3) Overload protection

~~(4) Where compressor systems having two or more compressors employ a control transformer or other voltage control power device, installation of at least two such devices.~~

(D) Medical air compressor system controls shall be provided with electrical systems including, but not limited to, the following:

(1) Built-in disconnect means to allow appropriate operation of multiple compressor systems and to protect service personnel from exposure to live voltages

~~(2) (5) Control circuits arranged in such a manner that the shutdown of one compressor does not interrupt the operation of another compressor~~ Control circuits arranged so that failure of any component of the control circuit or shutdown of one compressor (e.g., for service) does not interrupt automatic operation of the standby compressor

(3) Where components are common to more than one control circuit (e.g., autodrain), the common device provided with electrical protection to prevent loss of the control circuit(s) in the event of short circuit in the device

~~(4) (6)~~ Automatic restart function, such that the compressor(s) will restart after power interruption without manual intervention

(E) ~~(D)~~ Electrical installation and wiring shall conform to the requirements of *NFPA 70, National Electrical Code*.

(F) ~~(E)~~ Emergency electrical service for the compressors shall conform to the requirements of the essential electrical system as described in Chapter 6.

5.1.3.7.5 Electrical Power and Control.

5.1.3.7.5.1 Additional pumps shall automatically activate when the pump(s) in operation is incapable of adequately maintaining the required vacuum

5.1.3.7.5.2 Automatic or manual alternation of pumps shall allow division of operating time. If automatic alternation of pumps is not provided, the facility staff shall arrange a schedule for manual alternation.

5.1.3.7.5.3 Each pump motor shall be provided with electrical components including, but not limited to, the following:

(1) Dedicated disconnect switch installed in the electrical circuit ahead of each motor starter

(2) Motor starting device

(3) Overload protection

~~(4) Where pump systems having two or more pumps employ a control transformer or other voltage control power device, at least two such devices.~~

5.1.3.7.5.4 Vacuum source system controls shall be provided with electrical systems including, but not limited to, the following:

- ~~(1) (5) Control circuits arranged in such a manner that the shutdown of one pump does not interrupt the operation of another pump. Control circuits arranged so that failure of any component of the control circuit or shutdown of one pump (e.g., for service) does not interrupt automatic operation of the standby pump~~
- (2) Controls shall be provided with built-in disconnect means to allow appropriate operation of multiple pump systems and to protect service personnel from exposure to live voltages
- (4) Where components are common to more than one control circuit, the common device provided with electrical protection to prevent loss of the control circuit(s) in the event of short circuit in the device
- ~~(4) (6) Automatic restart function, such that the pump(s) will restart after power interruption without manual intervention~~

5.1.3.7.5.5 ~~5.1.3.7.5.4~~ Electrical installation and wiring shall conform to the requirements of *NFPA 70, National Electrical Code*.

5.1.3.7.5.6 ~~5~~ Emergency electrical service for the pumps shall conform to the requirements of the essential electrical system as described in Chapter 6.

5.1.3.8.4 Electrical Power and Control.

5.1.3.8.4.1 Additional producers shall automatically activate when the producer(s) in operation is incapable of maintaining the required vacuum

5.1.3.8.4.2 Automatic or manual alternation of producers shall allow division of operating time. If automatic alternation of producers is not provided, the facility staff shall arrange a schedule for manual alternation.

5.1.3.8.4.3 Each producer motor shall be provided with electrical components including, but not limited to, the following:

- (1) Dedicated disconnect switch installed in the electrical circuit ahead of each motor starter
- (2) Motor starting device
- (3) Overload protection
- ~~(4) Where WAGD systems having two or more producers employ a control transformer or other voltage control power device, at least two such devices.~~

5.1.3.8.4.4 WAGD source system controls shall be provided with electrical systems including, but not limited to, the following:

- ~~(1) (5) Control circuits arranged in such a manner that the shutdown of one producer does not interrupt the operation of another producer. Control circuits arranged so that failure of any component of the control circuit or shutdown of one producer (e.g., for service) does not interrupt automatic operation of the standby producer~~
- (2) Controls provided with built-in disconnect means to allow appropriate operation of multiple producer systems and to protect service personnel from exposure to live voltages
- (3) Where components are common to more than one control circuit, the common device shall be provided with electrical protection to prevent loss of the control circuit(s) in the event of short circuit in the device
- ~~(4) (6) Automatic restart function such that the producer(s) will restart after power interruption without manual intervention~~

5.1.3.8.4.5 ~~5.1.3.8.4.4~~ Electrical installation and wiring shall conform to the requirements of *NFPA 70, National Electrical Code*.

5.1.3.7.5.6 ~~5~~ Emergency electrical service for the producers shall conform to the requirements of the essential electrical system as described in Chapter 6.

5.1.13.3.5.13 Electrical Power and Control

(1) When multiple compressors are used, an additional compressor(s) shall automatically activate when the compressor(s) in operation is incapable of maintaining the required pressure

(2) When multiple compressors are used, automatic or manual alternation of compressors shall allow division of operating time. If automatic alternation of compressors is not provided, the facility staff shall arrange a schedule for manual alternation.

(3) Each compressor motor shall be provided with electrical components including, but not limited to, the following:

- (a) Dedicated disconnect switch installed in the electrical circuit ahead of each motor starter
- (b) Motor starting device
- (c) Overload protection
- (d) ~~Where compressor systems having two or more producers employ a control transformer or other voltage control power device, at least two such devices.~~

(4) Instrument air compressor system controls shall be provided with electrical systems including, but not limited to, the following:

- (a) Built-in disconnect means to allow appropriate operation of multiple compressor systems and to protect service personnel from exposure to live voltages
- (b) ~~(e) Control circuits arranged in such a manner that the shutdown of one compressor does not interrupt the operation of another compressor~~ Control circuits arranged so that failure of any component of the control circuit or shutdown of one compressor (e.g., for service) does not interrupt automatic operation of the standby compressor
- (c) Where components are common to more than one control circuit (e.g., autodrain), the common device provided with electrical protection to prevent loss of the control circuit(s) in the event of short circuit in the device
- (d) ~~(f)~~ Automatic restart function, such that the compressor(s) will restart after power interruption without manual intervention

(5) ~~(4)~~ Electrical installation and wiring shall conform to the requirements of NFPA 70, National Electrical Code.

(6) ~~(5)~~ Emergency electrical service for the compressors shall conform to the requirements of the essential electrical system as described in Chapter 6.

Submitters' Substantiation: This change more closely aligns the requirements of NFPA 99 with the *NEC* and provides an appropriate level of safety for workers in accordance with *NFPA 70E*. It prevents inadvertent loss of components that could endanger patient safety.

Emergency Nature: As currently written, this section does not align with *NFPA 70* or *NFPA 70E* and poses risk to staff working on components as well as patients in the case of system component failure. Component failure has caused failure of the entire system.

Anyone may submit a comment by the closing date indicated above. To submit a comment, please identify the number of the TIA and forward to the [Secretary, Standards Council, 1 Batterymarch Park, Quincy, MA 02169-7471](#).