NOTE:

All Sections and Appendices A and B in Subchapter 3, CASO, are proposed for transfer/relocation to Group 26 of Subchapter 7, General Industry Safety Orders, without substantive changes.

The rectangle in the left margin identifies the section number(s) where the standard(s) is/are proposed for transfer/relocation to.

Relocate Subchapter 3, Compressed Air Safety Orders, and the following Sections, as follows:

Article 1. Application

§1200. Application of Orders.

§ 6070

~~The following Orders shall apply for places of employment in California whenever persons are employed in compressed air, exclusive of diving work. Machines, equipment, processes, safety devices, and operations not specifically covered by these Orders shall be governed by other applicable safety orders.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 2. Definitions

§1204. Definitions.

§ 6074

~~The following definitions shall apply in the application of these Orders.~~

~~Air Lock (Personnel): A chamber through which employees pass from one air pressure environment into another.~~

~~Bulkhead: An airtight structure separating the working chamber from free air or from another chamber under a different pressure than the working pressure.~~

~~Caisson: A wood, steel, concrete or reinforced air and water-tight chamber in which it is possible for employees to work under air pressure greater than atmospheric pressure.~~

~~Compressed Air Environment (Hyperbaric Condition): A work site where the ambient pressure is greater than the atmospheric pressure at the entrance to the work site.~~

~~Decanting (surface decompression): A method used for decompressing under certain circumstances. In this procedure the workers are brought to atmospheric pressure with a very high gas tension in the tissues and then immediately re-compressed in a second and separate chamber or lock.~~

~~Division: The current Division of Occupational Safety and Health, any predecessors, or any subsequent successor agency.~~

~~Emergency Locks: A lock designed to hold and permit the quick passage of an entire shift of employees.~~

~~High Air: Air pressure used to supply power to pneumatic tools and devices.~~

~~Low Air: Air supplied to pressurize working chambers and locks.~~

~~Materials Lock: An air lock through which materials and equipment pass from one air pressure environment into another.~~

~~Hyperbaric Chamber: A chamber in which employees are treated for decompression sickness and/or air embolism. It may also be used in pre-employment physical examinations to determine the adaptability of the prospective employee to changes in pressure.~~

~~Normal Condition: One during which exposure to compressed air is limited to a single continuous working period followed by a single decompression in any given 24-hour period; the total time of exposure to compressed air during the single continuous is not interrupted by exposure to normal atmospheric pressure, and a second exposure to compressed air does not occur until at least 12 consecutive hours of exposure to normal atmospheric pressure have elapsed since the worker has been under pressure.~~

~~Pressure: A force acting on a unit area. Usually shown as pounds per square inch (psi).~~

§ 6074

~~Absolute Pressure (psi): The sum of the atmospheric pressure and gauge pressure (psig).~~

~~Ambient Pressure: Encompassing pressure surrounding all sides.~~

~~Atmospheric Pressure: The pressure of air at sea level, usually 14.7 psi (one atmosphere), or 0 Psig.~~

~~Gauge Pressure (psig): That pressure measured by a gauge and indicating the pressure exceeding atmospheric.~~

~~Safety Screen: An air- and water-tight diaphragm placed across the upper part of a compressed air tunnel between the face and bulkhead, in order to prevent flooding the crown of the tunnel between the safety screen and the bulkhead, thus providing a safe means of refuge and exit from a flooding or flooded tunnel.~~

~~Special Decompression Chamber: A chamber to provide greater comfort for employees when the total decompression time exceeds 75 minutes.~~

~~Working Chamber: The space or compartment under air pressure in which the work is being done.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 3. General Provisions

§1205. General Provisions.

§ 6075

~~(a) No work, where persons are employed in compressed air, shall be started until 7 days after the firm, corporation, commission, or person undertaking such work has notified, in writing, the Division of such contemplated work.~~

~~(b) The employer shall ensure that a competent person, who is familiar with these and other applicable safety orders, is present at the work site at all times when employees are required to work in a compressed air environment.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 4. Compression

§1210. Compression Rate.

~~(a) During the compression of employees, the pressure shall not be increased to more than 3 psig within the first minute. The pressure shall be held at 3 psig and again at 7 psig~~

~~sufficiently long to determine if any individuals are experiencing discomfort. After the first minute the pressure is to be raised uniformly and at a rate not to exceed 10 psi per minute. If any employees complain of discomfort, the pressure will be held to determine if the symptoms are relieved. If after 5 minutes the discomfort does not disappear, the lock attendant shall gradually reduce the pressure, until the employee signals that the discomfort has ceased. If the employee does not indicate that the discomfort has disappeared, the lock attendant shall reduce the pressure to atmospheric and the employee shall be released from the lock.~~
~~(b) No employee shall be subjected to pressure exceeding 50 pounds per square inch except in an emergency.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 5. Decompression

§1215. Normal Condition.

§ 6085

~~Decompression for normal condition shall be in accordance with the Decompression Tables. (See Decompression Table No. 1 and No. 2 in Appendix A.)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§1216. Repetitive Exposures.

§ 6087

~~In the event it is necessary for an employee to be in compressed air more than once in a 24-hour period, the appointed physician shall be responsible for the establishment of methods and procedures of decompression applicable to repetitive exposures. (See Appendix B.)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§1217. Decanting.

§ 6089

~~If decanting is necessary, the appointed physician shall establish procedures before anyone is permitted to be decompressed by decanting methods. The period of time that the employees spend at atmospheric pressure between the Recompression following the shift and recompression shall not exceed 5 minutes.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 6. Air Locks and Special Decompression Chamber

§1220. Air Locks.

~~(a) Except in emergency, no employees employed in compressed air shall be permitted to pass from the working chamber to atmospheric pressure until after decompression, in accordance with the procedures in either Appendix A, Appendix B, or Section 1217.~~
~~(b) The time of decompression shall be posted in each air lock.~~
~~(c) The lock attendant shall be under the direct supervision of the physician required by Section 1280, and stationed at the lock controls on the free air side during the period of compression and decompression. The lock attendant shall remain at the lock control station whenever there are employees in the working chamber or in the air lock.~~

§ 6090

~~(d) Except where air pressure in the working chamber is below 12 psig, each air lock shall be equipped with suitable automatic controls which automatically regulate decompressions. It shall also be equipped with manual controls to permit the lock attendant to override the automatic system in the event of an emergency.~~
~~(e) A manual control, which can be used in the event of an emergency, shall be placed inside the air lock.~~
~~(f) For each 8-hour shift, a record of employees employed under compressed air shall be kept by the lock attendant. This record shall show period of stay in the working chamber of each employee and the time taken for decompression.~~
~~(g) A clock, thermometer, and continuous recording pressure gauge with a 4-hour graph shall be installed outside of each air lock and shall be changed prior to each shift's decompression. The chart shall be of sufficient size to register a legible record of variations in pressure within the air lock and shall be visible to the lock attendant. A copy of each graph shall be submitted to the physician after each shift. In addition, a pressure gauge, clock, and thermometer shall also be installed in each air lock. Additional fittings shall be provided so that test gauges may be attached whenever necessary.~~
~~(h) Except where air pressure is below 12 psig and there is no danger of rapid flooding, all caissons having a working greater than 150 square feet and each bulkhead in tunnels of 14 feet or more in diameter, or equivalent area, shall have at least 2 locks in perfect working condition, 1 of which shall be used exclusively as an air lock. Where only a combination air and materials lock is required, this single lock shall be of sufficient capacity to hold the employees constituting two successive shifts. If emergency locks are provided, they shall be large enough to hold an entire heading shift and a limit maintained of 12 psig. There shall be a chamber available for oxygen decompression therapy to 28 psig.~~
~~(i) The air lock shall be large enough so that those using it are not compelled to be in a cramped position, and shall not have less than 5 feet clear head room at the center and a minimum of 30 cubic feet of air space per occupant.~~
~~(j) Locks on caissons shall be so located that the bottom door shall be not less than 3 feet above the water level surrounding the caisson on the outside. (Note: The water level, where it is affected by tides, is construed to mean high tide.)~~
~~(k) In addition to the pressure gauge in the locks, an accurate pressure gauge shall be maintained on the outer and inner side of each bulkhead. These gauges shall be accessible at all times and shall be kept in accurate working order.~~
~~(l) Air locks shall be illuminated and shall have an observation port at least 4 inches in diameter located in such a position that all occupants of the air lock may be observed from the working chamber and from the free air side of the lock.~~
~~(m) Air locks shall be maintained at a minimum temperature of 70 degrees Fahrenheit, dry bulb.~~
~~(n) When locks are not in use and employees are in the working chamber, lock doors shall be kept open to the working chamber, where practicable.~~
~~(o) All locks shall be constructed in accordance with the Unfired Pressure Vessel Safety Orders of the Division.~~
~~(p) Adequate ventilation shall be provided in accordance with the CCR, Title 8, Section 5143 of the General Industry Safety Orders.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§1225. Special Decompression Chamber.

~~(a) General. A special decompression chamber of sufficient size to accommodate the entire force of employees being decompressed at the end of a shift shall be provided whenever the regularly established working period requires a total time of decompression exceeding 75 minutes.~~

~~(b) Size, Capacity, and Construction. The headroom in the special decompression chamber shall be not less than 7 feet and the cubical content shall provide at least 50 cubic feet of air space for each person. For each occupant there shall be provided 4 square feet. of free walking area and 3 square feet of seating space exclusive of area required for lavatory and toilet facilities. The rated capacity shall be based on the stated minimum space per person and shall be posted at the chamber entrance. The posted capacity shall not be exceeded, except in case of emergency. The chamber shall be constructed in accordance with the Unfired Pressure Vessel Safety Orders.~~

§ 6095

~~(c) Equipment. Each special decompression chamber shall be equipped with the following:~~

~~(1) A clock or clocks suitably placed so that the attendant and the chamber occupants can readily ascertain the time;~~

~~(2) Pressure gauges which will indicate to the attendants and to the chamber occupants the pressure in the chamber;~~

~~(3) Valves to enable the attendant to control the supply and discharge of compressed air into and from the chamber;~~

~~(4) Valves and pipes in connection with the air supply and exhaust arranged so that the chamber pressure can be controlled from within and without;~~

~~(5) Effective means of oral communication between the attendant, occupants of the chamber, and the air compressor plant;~~

~~(6) An observation port at the entrance to permit observation of the chamber occupants~~

~~(7) Suitable mufflers at large air pressure drops.~~

~~(d) Seating Facilities. Seating facilities in special decompression chambers shall so arranged as to permit a normal sitting posture. Seating space not less than 18 inches by 24 inches wide shall be provided per occupant.~~

~~(e) Automatic Controls. Special decompression chambers shall be equipped with automatic controls complying with Section 1220(d) and (e).~~

~~(f) Sanitation. Adequate toilet and washing facilities in a screened or enclosed recess shall be provided. Toilet bowls shall have a built-in protector on the rim so that an air space is created when the seat lid is closed. Potable drinking water shall be provided. This may be accomplished by either piping water into the special decompression chamber and providing drinking fountains, or by providing individual canteens or by some other sanitary means. Common drinking vessels shall be prohibited. The chamber shall be kept clean.~~

~~(g) Location. Unless the special decompression chamber is serving as the air lock to atmospheric pressure the special decompression chamber shall be situated where practicable, adjacent to the air lock on the atmospheric pressure side of the bulkhead. A passageway shall be provided connecting the special chamber with the air lock to permit employees in the process of decompression to move from the air lock to the special chamber without a reduction in the ambient pressure from that designated for the next stage of decompression. The passageway shall be so arranged as to not interfere with the~~

~~normal operation of the air lock nor with the release of the occupants of the special chamber to atmospheric pressure upon the completion of the decompression procedure.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 7. Temperature, Illumination, Sanitation and Ventilation

§1230. Temperature, Illumination, Sanitation and Ventilation.

~~(a) Temperature of all working chambers which are subjected to compressed air shall, by means of after-coolers or other suitable devices, be maintained at a temperature not to exceed 85 degrees Fahrenheit.~~

§ 6100

~~(b) Illumination in compressed air chambers shall be by electricity exclusively and two independent electric-lighting systems with independent sources of supply shall be used. The emergency source shall be arranged to become automatically operative in the event of failure of the regularly used source. Electrical installations and equipment shall comply with applicable portions of the Electrical Safety Orders in Title 8 of the CCR.~~

~~(c) The minimum intensity of illumination on any walkway, ladder, stairway, or working level shall not be less than 10-foot candles, and in all work places the illumination shall at all times be such as to enable employees to see clearly.~~

~~(d) Sanitary, heated, illuminated, and ventilated dressing rooms and drying rooms shall be provided for all employees engaged in compressed air work. Such rooms shall contain suitable benches and lockers. Bathing accommodations (showers at the ratio of 1 to 10 employees per shift) equipped with running hot and cold water along with suitable and adequate toilet accommodations shall be provided. One toilet for each 15 employees, or fractional part thereof, shall be provided. While in a compressed air environment and the toilet bowl is shut by a cover, there shall be an air space so that the bowl or bucket does not implode when the pressure is increased. All parts of caissons and other working compartments shall be kept in a sanitary condition.~~

~~(e) Ventilation in the locks and chambers, with the exception of the medical chamber, shall be such that the air quality meets the requirement of Section 5144(e) of the General Industry Safety Orders.~~

~~(f) Exhaust valves and exhaust pipes shall be provided and operated so that the working chamber shall be well ventilated, and there shall be no pockets of dead air. Outlets may be required at intermediate points along the main low pressure air supply line to the heading to eliminate such pockets of dead air. Ventilating air shall be not less than 30 cubic feet per minute per person.~~

~~(g) The air in the workplace shall be analyzed by the employer not less than once each shift, and records of such tests shall be kept on file at the place where the work is in progress. The test results shall be within the permissible exposure limits (PEL's) specified in the CCR, Title 8, Section 5155 of the General Industry Safety Orders, for hazardous gases and within 10 percent of the lower explosive limit of flammable gases.~~

~~(h) Forced ventilation shall be provided during decompression. During the entire decompression period, forced ventilation through chemical or mechanical air purifying devices that will ensure a source of fresh air shall be provided.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 8. Compressor Plant, Air Supply, and Telephone Communication

§1240. Compressor Plant, Air Supply and Telephone Communication.

~~(a) There shall at all times be a qualified gauge tender on duty at the air control valves to regulate the pressure in the working areas. During tunneling operations, one gauge tender may regulate the pressure in not more than two headings provided that the gauges and controls are all in one location. In caisson work there shall be a gauge tender for each caisson.~~

§ 6105

~~(b) The low air compressor plant shall be of sufficient capacity to not only permit the work to be done safely, but shall provide a margin to meet anticipated emergencies and repairs.~~

~~(c) Low air compressor units shall have at least two independent and separate sources of power supply. Each independent and separate source of power supply shall be capable of operating the entire low air plant and its accessory systems.~~

~~(d) The capacity, arrangement, and number of compressors shall be sufficient to maintain the necessary pressure without overloading the equipment and to assure maintenance of such pressure in the working chamber during periods of breakdown, repair, or emergency.~~

~~(e) Switching from one independent source of power supply to the other shall be done periodically to ensure the workability of the apparatus in an emergency.~~

~~(f) Duplicate low pressure air feed lines and regulating valves shall be provided between the source of air supply and a point beyond the locks with one of the lines extending to within 100 feet of the working face.~~

~~(g) To prevent rapid decompression all air supply lines shall be equipped with check valves.~~

~~(h) Low pressure air shall be regulated automatically. In addition, manually operated valves shall be provided for emergency conditions.~~

~~(i) The air intakes for all air compressors shall be located at a place where fumes, exhaust gases, and other air contaminants will be at a minimum.~~

~~(j) Gauges indicating the pressure in the working chamber shall be installed in the compressor building, the lock attendant's station, and at the Field Office of the employer's representative.~~

~~(k) There shall be effective communication at all times between the following:~~

~~(1) The working chamber face;~~

~~(2) The working chamber side of the air lock near the door;~~

~~(3) The interior of the air lock;~~

~~(4) Lock attendants station;~~

~~(5) The compressor plant;~~

~~(6) The first-aid station;~~

~~(7) The emergency lock (if one is required);~~

~~(8) The special decompression chamber (if one is required).~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 9. Bulkheads and Screens

§1250. Bulkheads and Screens.

§ 6110

~~(a) Intermediate bulkheads with locks or intermediate safety screens or both shall be required where there is the danger of rapid flooding.~~
~~(b) In tunnels 16 feet or more in diameter, hanging walkways shall be provided from the face to the air lock, as high in the tunnel as practicable, with at least 6 feet of head room. Walkways shall be constructed of noncombustible material. Standard railing shall be securely installed throughout the length of all walkways on open sides. Where walkways are ramped under safety screens, the walkway surface shall be skidproofed by cleats or equivalent means.~~
~~(c) Bulkheads used to contain compressed air shall be tested, where practicable, to prove their ability to resist the highest air pressure which may be expected to be used.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 10. Fire Prevention

§1270. Fire Prevention.

§ 6115

~~(a) Tunnels shall be provided with a 2-inch minimum diameter water line extending into the working chamber and to within 100 feet of the working face. Such line shall have hose outlets with 100 feet of fire hose properly attached and maintained as follows: one at the working face; one immediately inside the bulkhead of the working chamber; and one immediately outside such bulkhead. In addition, hose outlets shall be provided at 200-foot intervals throughout the length of the tunnel and 100 feet of fire hose shall be attached to the outlet nearest to any location where flammable material is being kept or stored or where any flame is being used.~~
~~(b) Fire hose shall be at least 11/2 inches in nominal diameter. Water pressure shall at all times be adequate for efficient operation of the type of nozzle used and the water supply shall be such as to ensure an uninterrupted flow. Fire hose, when not in use, shall be located or guarded to prevent injury thereto.~~
~~(c) In addition to fire hose protection required by this section, on every floor of every building not under compressed air, but used in connection with the compressed air work, there shall be provided at least one approved extinguisher of the proper type for the hazard involved. At least two approved fire extinguishers shall be provided in the working chamber as follows: one at the working face and one immediately inside the bulkhead (pressure side). Extinguishers in the working chamber shall use water as the primary extinguishing agent and shall not use any extinguishing agent which could be harmful to the employees in the working chamber. The fire extinguisher shall be protected from damage.~~
~~(d) No persons shall be permitted to smoke or carry smoking materials in compressed air.~~
~~(e) While welding or flame cutting is being done in compressed air, a watch person with a fire hose or approved extinguisher shall stand by until such operation is completed.~~
~~(f) Highly combustible materials shall not be used or stored in the working chamber. Wood, paper, and similar combustible material shall not be used in the working chamber in quantities which could cause a fire hazard. The compressor building shall be constructed of noncombustible materials.~~
~~(g) Air locks shall be equipped with a manual-type fire extinguisher system that can be activated inside the air lock and also by the outside lock attendant. In addition, a fire~~

~~hose and portable fire extinguisher shall be provided inside and outside the air lock. The portable fire extinguisher shall be the dry chemical type.~~
~~(h) Equipment, fixtures, and furniture in air locks and special decompression chambers shall be constructed of noncombustible materials. Bedding and other furnishings shall be chemically treated so as to be fire-resistant.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 11. Medical Attendance, Examination, and Regulations

§1280. Medical Control.

~~(a)(1) There shall be retained 1 or more physicians licensed in the State of California familiar with and experienced in the physical requirements for the medical aspects of compressed air work. The physician shall be available at all times while work is in progress in order to provide medical supervision of employees employed in compressed air work. The physician shall meet the physical qualifications of a compressed air worker and be willing to enter a pressurized environment.~~

§ 6120

~~(2) No employee shall be permitted to enter a compressed air environment until qualified by a physician in accordance with Section 6053 of the General Industry Safety Orders.~~
~~(3) An oxygen tolerance test shall be passed by all persons engaged in compressed air work.~~
~~(4) In the event an employee is absent from work for 10 or more consecutive days the employee shall be determined to be medically fit to resume compressed air work by the physician.~~
~~(5) Medical records shall be kept as required by applicable parts of Section 6058 of the General Industry Safety Orders.~~
~~(b) Except when the air pressure in the working chamber is below 14 psig a medical chamber shall be established and maintained in immediate working order.~~
~~The medical chamber shall:~~
~~(1) Have at least six feet of clear headroom at the center, and be subdivided into not less than two compartments.~~
~~(2) Be readily accessible to employees working under compressed air.~~
~~(3) Be kept ready for immediate use for at least five hours subsequent to the emergence of any employee from the working chamber.~~
~~(4) Be properly heated, lighted and ventilated.~~
~~(5) Be maintained in a sanitary condition.~~
~~(6) Have a non-shatterable port through which the occupant(s) may be kept under constant observation.~~
~~(7) Be constructed and tested in accordance with the Unfired Pressure Vessel Safety Orders; the medical lock shall be retested whenever it has been out of service for more than 1 year and whenever it is moved from one location to another.~~
~~(8) Be designed for a working pressure of 75 psig.~~
~~(9) Be equipped with internal controls which may be overridden by external controls.~~
~~(10) Be provided with air pressure gauges to show the air pressure within each compartment to observers inside and outside the medical chamber.~~
~~(11) Be equipped with a quick acting automatic sprinkler system.~~

~~(12) Be provided with oxygen lines and fittings leading into external tanks. The lines shall be fitted with check valves to prevent reverse flow.~~
~~(13) Be in constant charge of an attendant under the direct control of the retained physician. The attendant shall be trained in the use of the chamber and suitably instructed regarding steps to be taken in the treatment of employees exhibiting symptoms compatible with a diagnosis of decompression sickness.~~
~~(14) Be located adjacent to an emergency medical facility. The emergency medical facility shall be equipped, as required by the retained physician, with approved demand type oxygen inhalation equipment.~~
§ 6120
~~(15) Be capable of being maintained at a temperature, in use, not to exceed 90 degrees Fahrenheit nor be less than 70 degrees Fahrenheit.~~
~~(16) Be provided with sources of oil free air, both normal and emergency, which are capable of raising the air pressure in the chamber from 0 to 75 psig in five minutes.~~
~~(c) Identification badges shall be furnished to all employees, indicating that the wearer is a compressed air worker. The badge shall give employee's name, address of the medical chamber, the phone number of the licensed physician for the compressed air project, and contain instructions that in case of an emergency of unknown or doubtful cause or illness, the wearer shall be rushed to the medical chamber. The badge shall be worn at all times off the job as well as on the job.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

NOTE:
Appendices A and B are proposed for transfer/relocation to Group 26 of Subchapter 7, General Industry Safety Orders, without substantive changes, immediately following proposed Section 6120.

Relocate Appendices A and B to Group 26 of Subchapter 7, General Industry Safety Orders, to follow New Section 6120, as follows:

Article 12. Suggestions for the Guidance of Compressed Air Workers

~~Appendix A~~

~~Decompression Tables~~

~~1. EXPLANATION. The decompression tables are computed for working chamber pressures from 0 to 14 pounds, and from 14 to 50 pounds per square inch gauge inclusive by 2-pound increments and for exposure times for each pressure extending from 1/2 to over 8 hours inclusive. Decompressions will be conducted by 2 or more stages with a maximum of 4 stages, the latter for a working chamber pressure of 40 pounds per square inch gauge or over.~~

~~Stage 1 consists of a reduction in ambient pressure ranging from 10 to a maximum of 16 pounds per square inch, but in no instance will the pressure be reduced below 4 pounds at the end of stage 1. This reduction in pressure in stage I will always take place at a rate not greater than 5 pounds per minute.~~

~~Further reduction in pressure will take place during stage 2 and subsequent stages as required at a slower rate, but in no event at a rate greater than 1 pound per minute.~~

~~Decompression Table No. 1 indicates in the body of the table the total decompression time in minutes for various combinations of working chamber pressure and exposure time.~~

~~Decompression Table No. 2 indicates for the same various combinations of working chamber pressure and exposure time the following:~~

~~a. The number of stages required;~~

~~b. The reduction in pressure and the terminal pressure for each required stage;~~

~~c. The time in minutes through which the reduction in pressure is accomplished for each required stage;~~

~~d. The pressure reduction rate in minutes per pound for each required stage;~~

~~IMPORTANT NOTE: THE PRESSURE REDUCTION IN EACH STAGE IS ACCOMPLISHED AT A UNIFORM RATE. DO NOT INTERPOLATE BETWEEN VALUES SHOWN ON THE TABLES. USE THE NEXT HIGHER VALUE OF WORKING CHAMBER PRESSURE OR EXPOSURE TIME SHOULD THE ACTUAL WORKING CHAMBER PRESSURE OR THE ACTUAL EXPOSURE TIME, RESPECTIVELY, FALL BETWEEN THOSE FOR WHICH CALCULATED VALUES ARE SHOWN IN THE BODY OF THE TABLES.~~

~~Examples:~~

~~Example No. 1~~

~~4 hours working period at 20 pounds gauge~~

~~Decompression Table No. 1~~

~~20 pounds for 4 hours,~~

~~Total Decompression Time ..... 43 minutes~~

~~Decompression Table No. 2~~

~~Stage 1~~

~~Reduce pressure from 20 pounds to 4 pounds at the uniform rate of 5 pounds per minute.~~

~~Elapsed time stage 1: 16/5 ..... 3 minutes~~

~~Stage 2 (final stage)~~

~~Reduce pressure at a uniform rate from 4 pounds to 0 pound gauge over a period of 40 minutes.~~

~~Rate -- 0.10 pounds per minute or 10.00 minutes per pound~~

~~Stage 2 (final) elapsed time..... 40 minutes~~

~~Total Time ..... 43 minutes~~

~~Example No. 2~~

~~5 hour working period at 24 pounds gauge~~

~~Decompression Table No. 1~~

~~24 pounds for 5 hours~~

~~Total Decompression Time ..... 117 minutes~~

~~Decompression Table No. 2~~

~~Stage 1~~

~~Reduce pressure from 24 pounds to 8 pounds at~~

~~the uniform rate of 5 pounds per minute~~
~~Elapsed time stage 1: 16/5 ..... 3 minutes~~
~~Stage 2~~
~~Reduce pressure at a uniform rate from 8 pounds to 4 pounds over a period of 4 minutes.~~
~~Rate, 1 pound per minute~~
~~Elapsed time, stage 2 ..... 4 minutes~~
~~Transfer persons to Special Decompression Chamber maintaining the 4-pound pressure during the transfer operation.~~
~~Stage 3 (final stage)~~
~~In the Special Decompression Chamber, reduce the pressure at a uniform rate from 4 pounds to 0 pound gauge over a period of 110 minutes.~~
~~Rate, 0.037 pounds per minute or 27.5 minutes per pound~~
~~Stage 3 (final) elapsed time. ..... 110 minutes~~
~~Total Time ..... 117 minutes~~

DECOMPRESSION TABLE NO. 1
Total Decompression Time—Minutes

WORK PRESSURE psig	Working Period Hours										
	½	1	1½	2	3	4	5	6	7	8	Over 8
0–12	3	3	3	3	3	3	3	3	3	3	3
14	5	6	6	6	6	6	6	6	16	16	32
16	7	7	7	7	7	7	17	33	48	48	63
18	7	7	7	8	11	17	48	63	63	73	87
20	7	7	8	15	15	43	63	73	83	103	113
22	9	9	16	24	38	68	93	103	113	128	133
24	11	12	23	27	59	92	117	122	127	137	151
26	13	14	29	34	69	104	126	141	142	142	163
28	15	23	31	41	98	127	143	153	153	165	183
30	17	28	38	62	105	143	165	168	178	188	204
32	19	35	43	85	126	163	178	193	203	213	226
34	21	39	58	98	151	178	198	218	223	233	248
36	24	44	63	113	170	198	223	233	243	253	273
38	28	49	73	128	178	203	223	238	253	263	278
40	31	49	84	143	183	213	233	248	258	278	288
42	37	56	102	144	189	215	245	260	263	268	293
44	43	64	118	154	199	234	254	264	269	269	293
46	44	74	139	171	214	244	269	274	289	299	318
48	51	89	144	189	229	269	299	309	319	319	—
50	58	94	164	209	249	279	309	329	—	—	—

DECOMPRESSION TABLE NO. 2

Working chamber pressure	Working period	Decompression data				
		Stage no.	Pressure reduction psig	Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From To	Minutes	Min/Pound	Minutes
14	½	1	14 4	2	0.20	
		2	4 0	4	1.00	6
	1	1	14 4	2	0.20	
		2	4 0	4	1.00	6
	1½	1	14 4	2	0.20	
		2	4 0	4	1.00	6
	2	1	14 4	2	0.20	
		2	4 0	4	1.00	6
	3	1	14 4	2	0.20	
		2	4 0	4	1.00	6
	4	1	14 0	2	0.20	
		2	4 0	4	1.00	6
	5	1	14 4	2	0.20	
		2	4 0	4	1.00	6
	6	1	14 4	2	0.20	
		2	4 0	4	1.00	6
	7	1	14 4	2	0.20	
		2	4 0	14	3.50	16
	8	1	14 4	2	0.20	
		2	4 0	14	3.50	16
	Over 8	1	14 4	2	0.20	
		2	4 0	30	7.50	32
16	½	1	16 4	3	0.20	
		2	4 0	4	1.00	7
	1	1	16 4	3	0.20	
		2	4 0	4	1.00	7
	1½	1	16 4	3	0.20	
		2	4 0	4	1.00	7
	2	1	16 4	3	0.20	
		2	4 0	4	1.00	7
	3	1	16 4	3	0.20	
		2	4 0	4	1.00	7
	4	1	16 4	3	0.20	
		2	4 0	4	1.00	7
	5	1	16 4	3	0.20	
		2	4 0	4	3.50	17
	6	1	16 4	3	0.20	
		2	4 0	30	7.50	33
	7	1	16 4	3	0.20	
		2	4 0	45	11.25	48
	8	1	16 4	3	0.20	
		2	4 0	45	11.25	48
	Over 8	1	16 4	3	0.20	
		2	4 0	60	15.00	63
18	½	1	18 4	3	0.20	
		2	4 0	4	1.00	7

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data					
		Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
	1	1	18	4	3	0.20	
		2	4	0	4	1.00	7
	1½	1	18	4	3	0.20	
		2	4	0	4	1.00	7
	2	1	18	4	3	0.20	
		2	4	0	5	1.25	8
	3	1	18	4	3	0.20	
		2	4	0	8	2.00	11
	4	1	18	4	3	0.20	
		2	4	0	14	3.50	17
	5	1	18	4	3	0.20	
		2	4	0	45	11.25	48
	6	1	18	4	3	0.20	
		2	4	0	60	15.00	63
	7	1	18	4	3	0.20	
		2	4	0	60	15.00	63
	8	1	18	4	3	0.20	
		2	4	0	70	17.50	73
	Over 8	1	18	4	3	0.20	
		2	4	0	84	21.00	87
20	½	1	20	4	3	0.20	
		2	4	0	4	1.00	7
	1	1	20	4	3	0.20	
		2	4	0	4	1.00	7
	1½	1	20	4	3	0.20	
		2	4	0	5	1.25	8
	2	1	20	4	3	0.20	
		2	4	0	12	3.00	15
	3	1	20	4	3	0.20	
		2	4	0	12	3.00	15
	4	1	20	4	3	0.20	
		2	4	0	40	10.00	43
	5	1	20	4	3	0.20	
		2	4	0	60	15.00	63
	6	1	20	4	3	0.20	
		2	4	0	70	17.50	73
	7	1	20	4	3	0.20	
		2	4	0	80	20.00	83
	8	1	20	4	3	0.20	
		2	4	0	100	25.00	103
	Over 8	1	20	4	3	0.20	
		2	4	0	110	27.50	113
22	½	1	22	6	3	0.20	
		2	6	0	6	1.00	9
	1	1	22	6	3	0.20	
		2	6	0	6	1.00	9

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Working period Hours	Decompression data: Stage no.	Pressure reduction psig From	Pressure reduction psig To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	1½	1	22	6	3	0.20	
		2	6	0	13	2.20	16
	2	1	22	6	3	0.20	
		2	6	0	21	3.50	24
	3	1	22	6	3	0.20	
		2	6	0	35	5.85	38
	4	1	22	6	3	0.20	
		2	6	0	65	10.83	68
	5	1	22	6	3	0.20	
		2	6	0	90	15.00	93
	6	1	22	6	3	0.20	
		2	6	0	100	16.67	103
	7	1	22	6	3	0.20	
		2	6	0	110	18.35	113
	8	1	22	6	3	0.20	
		2	6	0	125	20.80	128
	Over 8	1	22	6	3	0.20	
		2	6	0	130	21.70	133
24	½	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	4	1.00	11
	1	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	5	1.25	12
	1½	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	16	4.00	23
	2	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	20	5.00	27
	3	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	45	11.25	52
	4	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	85	21.25	92
	5	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	110	27.50	117
	6	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	115	28.80	122
	7	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	120	30.00	127
	8	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	130	32.50	137
	Over 8	1	24	8	3	0.20	
		2	8	4	8	2.00	
		3	4	0	140	35.00	151

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data					
		Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
26	½	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	4	1.00	13
	1	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	5	1.25	14
	1½	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	20	5.00	29
	2	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	25	6.25	34
	3	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	60	15.00	69
	4	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	95	23.75	104
	5	1	26	10	3	0.20	
		2	10	4	8	1.33	
		3	4	0	115	28.80	126
	6	1	26	10	3	0.20	
		2	10	4	8	1.33	
		3	4	0	130	32.50	141
	7	1	26	10	3	0.20	
		2	10	4	9	1.50	
		3	4	0	130	32.50	142
	8	1	26	10	3	0.20	
		2	10	4	9	1.50	
		3	4	0	130	32.50	142
	Over 8	1	26	10	3	0.20	
		2	10	4	30	5.00	
		3	4	0	130	32.50	163
28	½	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	4	1.00	15
	1	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	12	3.00	23
	1½	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	20	5.00	31
	2	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	30	7.50	41
	3	1	28	12	3	0.20	
		2	12	4	10	1.25	
		3	4	0	85	21.20	96
	4	1	28	12	3	0.20	
		2	12	4	14	1.75	
		3	4	0	110	27.50	127

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Working period Hours	Decompression data: Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	5	1	28	12	3	0.20	
		2	12	4	20	2.50	
		3	4	0	120	30.00	143
	6	1	28	12	3	0.20	
		2	12	4	20	2.50	
		3	4	0	130	32.50	153
	7	1	28	12	3	0.20	
		2	12	4	20	2.50	
		3	4	0	130	32.50	153
	8	1	28	12	3	0.20	
		2	12	4	22	4.00	
		3	4	0	130	32.50	165
	Over 8	1	28	12	3	0.20	
		2	12	4	50	6.25	
		3	4	0	130	32.50	183
30	½	1	30	14	3	0.20	
		2	14	4	10	1.00	
		3	4	0	4	1.00	17
	1	1	30	14	3	0.20	
		2	14	4	10	1.00	
		3	4	0	15	3.75	28
	1½	1	30	14	3	0.20	
		2	14	4	10	1.00	
		3	4	0	25	6.25	38
	2	1	30	14	3	0.20	
		2	14	4	14	1.40	
		3	4	0	45	11.25	62
	3	1	30	14	3	0.20	
		2	14	4	17	1.70	
		3	4	0	85	21.20	105
	4	1	30	14	3	0.20	
		2	14	4	30	3.00	
		3	4	0	110	27.50	143
	5	1	30	14	3	0.20	
		2	14	4	35	3.50	
		3	4	0	130	32.50	165
	6	1	30	14	3	0.20	
		2	14	4	35	3.50	
		3	4	0	130	32.50	168
	7	1	30	14	3	0.20	
		2	14	4	45	4.50	
		3	4	0	130	32.50	178
	8	1	30	14	3	0.20	
		2	14	4	55	5.50	
		3	4	0	130	32.50	188
	Over 8	1	30	14	3	0.20	
		2	14	4	71	7.10	
		3	4	0	130	32.50	204
32	½	1	32	16	3	0.20	
		2	16	4	12	1.00	
		3	4	0	4	1.00	19

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Working period Hours	Decompression data: Stage no.	Pressure reduction psig From	Pressure reduction psig To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	1	1	32	16	3	0.20	
		2	16	4	12	1.00	
		3	4	0	20	5.00	35
	1½	1	32	16	3	0.20	
		2	16	4	15	1.25	
		3	4	0	25	6.25	43
	2	1	32	16	3	0.20	
		2	16	4	22	1.83	
		3	4	0	60	15.00	85
	3	1	32	16	3	0.20	
		2	16	4	28	2.33	
		3	4	0	95	23.75	126
	4	1	32	16	3	0.20	
		2	16	4	40	3.33	
		3	4	0	120	30.00	163
	5	1	32	16	3	0.20	
		2	16	4	45	3.75	
		3	4	0	130	32.50	178
	6	1	32	16	3	0.20	
		2	16	4	60	5.00	
		3	4	0	130	32.50	193
	7	1	32	16	3	0.20	
		2	16	4	70	5.83	
		3	4	0	130	32.50	203
	8	1	32	16	3	0.20	
		2	16	4	80	6.67	
		3	4	0	130	32.50	213
	Over 8	1	32	16	3	0.20	
		2	16	4	93	7.75	
		3	4	0	130	32.50	226
34	½	1	34	18	3	0.20	
		2	18	4	14	1.00	
		3	4	0	4	1.00	21
	1	1	34	18	3	0.20	
		2	18	4	14	1.00	
		3	4	0	22	5.50	39
	1½	1	34	18	3	0.20	
		2	18	4	25	1.80	
		3	4	0	30	7.50	58
	2	1	34	18	3	0.20	
		2	18	4	35	2.50	
		3	4	0	60	15.00	98
	3	1	34	18	3	0.20	
		2	18	4	43	3.10	
		3	4	0	105	26.25	151
	4	1	34	18	3	0.20	
		2	18	4	55	3.93	
		3	4	0	120	30.00	178
	5	1	34	18	3	0.20	
		2	18	4	62	4.43	
		3	4	0	130	32.50	195

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data					
		Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time
psig	Hours		From	To	Minutes	Min/Pound	Minutes
	6	1	34	18	3	0.20	
		2	18	4	85	6.07	
		3	4	0	130	32.50	218
	7	1	34	18	3	0.20	
		2	18	4	90	6.43	
		3	4	0	130	32.50	223
	8	1	34	18	3	0.20	
		2	18	4	100	7.15	
		3	4	0	130	32.50	233
	Over 8	1	34	18	3	0.20	
		2	18	4	115	8.23	
		3	4	0	130	32.50	248
36	½	1	36	20	3	0.20	
		2	20	4	16	1.00	
		3	4	0	5	1.25	24
	1	1	36	20	3	0.20	
		2	20	4	16	1.00	
		3	4	0	25	6.25	44
	1½	1	36	20	3	0.20	
		2	20	4	30	1.88	
		3	4	0	30	7.50	63
	2	1	36	20	3	0.20	
		2	20	4	40	2.50	
		3	4	0	70	17.50	113
	3	1	36	20	3	0.20	
		2	20	4	52	3.25	
		3	4	0	115	28.75	170
	4	1	36	20	3	0.20	
		2	20	4	65	4.06	
		3	4	0	130	32.50	196
	5	1	36	20	3	0.20	
		2	20	4	90	5.63	
		3	4	0	130	32.50	223
	6	1	36	20	3	0.20	
		2	20	4	100	6.25	
		3	4	0	130	32.50	233
	7	1	36	20	3	0.20	
		2	20	4	110	6.88	
		3	4	0	130	32.50	243
	8	1	36	20	3	0.20	
		2	20	4	120	7.50	
		3	4	0	130	32.50	253
	Over 8	1	36	20	3	0.20	
		2	20	4	140	8.75	
		3	4	0	130	32.50	273
38	½	1	38	22	3	0.20	
		2	22	6	16	1.00	
		3	6	0	9	1.50	28
	1	1	38	22	3	0.20	
		2	22	6	16	1.00	
		3	6	0	30	5.00	49

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data					
		Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
	1¼	1	38	22	3	0.20	
		2	22	6	20	1.25	
		3	6	0	50	8.34	73
	2	1	38	22	3	0.20	
		2	22	6	30	1.88	
		3	6	0	95	15.83	128
	3	1	38	22	3	0.20	
		2	22	6	35	2.19	
		3	6	0	140	23.35	178
	4	1	38	22	3	0.20	
		2	22	6	50	3.12	
		3	6	0	150	25.00	203
	5	1	38	22	3	0.20	
		2	22	6	55	3.44	
		3	6	0	165	27.50	223
	6	1	38	22	3	0.20	
		2	22	6	70	4.38	
		3	6	0	165	27.50	238
	7	1	38	22	3	0.20	
		2	22	6	85	5.32	
		3	6	0	165	27.50	253
	8	1	38	22	3	0.20	
		2	22	6	95	5.93	
		3	6	0	165	27.50	263
	Over 8	1	38	22	3	0.20	
		2	22	6	110	6.88	
		3	6	0	165	27.50	278
40	½	1	40	24	3	0.20	
		2	24	8	16	1.00	
		3	8	4	4	1.00	
		4	4	0	8	2.00	31
	1	1	40	24	3	0.20	
		2	24	8	16	1.00	
		3	8	4	5	1.25	
		4	4	0	25	6.25	49
	1½	1	40	24	3	0.20	
		2	24	8	16	1.00	
		3	8	4	20	5.00	
		4	4	0	45	11.25	84
	2	1	40	24	3	0.20	
		2	24	8	25	1.56	
		3	8	4	20	5.00	
		4	4	0	95	23.75	143
	3	1	40	24	3	0.20	
		2	24	8	30	1.88	
		3	8	4	30	7.50	
		4	4	0	120	30.00	183
	4	1	40	24	3	0.20	
		2	24	8	45	2.81	
		3	8	4	35	8.75	
		4	4	0	130	32.50	213

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data					
		Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
	5	1	40	24	3	0.20	
		2	24	8	47	2.94	
		3	8	4	53	13.25	
		4	4	0	130	32.50	233
	6	1	40	24	3	0.20	
		2	24	8	55	3.44	
		3	8	4	60	15.00	
		4	4	0	130	32.50	248
	7	1	40	24	3	0.20	
		2	24	8	65	4.06	
		3	8	4	60	15.00	
		4	4	0	130	32.50	258
	8	1	40	24	3	0.20	
		2	24	8	75	4.70	
		3	8	4	60	15.00	
		4	4	0	130	32.50	268
	Over 8	1	40	24	3	0.20	
		2	24	8	95	5.93	
		3	8	4	60	15.00	
		4	4	0	130	32.50	288
42	½	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	6	1.00	
		4	4	0	12	3.00	37
	1	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	12	2.00	
		4	4	0	25	6.25	56
	1½	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	23	3.83	
		4	4	0	60	15.00	102
	2	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	30	5.00	
		4	4	0	95	23.75	144
	3	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	50	8.34	
		4	4	0	120	30.00	189
	4	1	42	26	3	0.20	
		2	26	10	17	1.06	
		3	10	4	65	10.83	
		4	4	0	130	32.50	215
	5	1	42	26	3	0.20	
		2	26	10	27	1.69	
		3	10	4	85	14.18	
		4	4	0	130	32.50	245
	6	1	42	26	3	0.20	
		2	28	10	27	1.69	
		3	10	4	100	16.67	
		4	4	0	130	32.50	260
	7	1	42	26	3	0.20	
		2	26	10	30	1.88	
		3	10	4	100	16.67	
		4	4	0	130	32.50	263

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data					
		Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
	8	1	42	26	3	0.20	
		2	26	10	35	2.19	
		3	10	4	100	16.67	
		4	4	0	130	32.50	268
	Over 8	1	42	26	3	0.20	
		2	26	10	60	3.75	
		3	10	4	100	16.67	
		4	4	0	130	32.50	293
44	½	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	8	1.00	
		4	4	0	16	4.00	43
	1	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	20	2.50	
		4	4	0	25	6.25	64
	1½	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	27	3.38	
		4	4	0	72	18.00	118
	2	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	40	5.00	
		4	4	0	95	23.75	154
	3	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	60	7.50	
		4	4	0	120	30.00	199
	4	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	85	10.62	
		4	4	0	130	32.50	234
	5	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	105	13.13	
		4	4	0	130	32.50	254
	6	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	115	14.38	
		4	4	0	130	32.50	264
	7	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	120	15.00	
		4	4	0	130	32.50	269
	8	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	120	15.00	
		4	4	0	130	32.50	269
	Over 8	1	44	28	3	0.20	
		2	28	12	40	2.50	
		3	12	4	120	15.00	
		4	4	0	130	32.50	293

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data					
		Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
46	½	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	10	1.00	
		4	4	0	15	3.75	44
	1	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	25	2.50	
		4	4	0	30	7.50	74
	1½	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	35	3.30	
		4	4	0	85	21.20	139
	2	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	47	4.70	
		4	4	0	105	26.25	171
	3	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	65	6.50	
		4	4	0	130	32.50	214
	4	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	95	9.50	
		4	4	0	130	32.50	244
	5	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	120	12.00	
		4	4	0	130	32.50	269
	6	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	125	12.50	
		4	4	0	130	32.50	274
	7	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	140	14.00	
		4	4	0	130	32.50	289
	8	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	150	15.00	
		4	4	0	130	32.50	299
	Over 8	1	46	30	3	0.20	
		2	30	14	25	1.56	
		3	14	4	160	16.00	
		4	4	0	130	32.50	318
48	½	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	12	1.00	
		4	4	0	20	5.00	51
	1	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	35	2.92	
		4	4	0	35	8.75	89
	1½	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	45	3.75	
		4	4	0	80	20.00	144

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Working period	Decompression data				
		Stage no.	Pressure reduction psig	Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From To	Minutes	Min/Pound	Minutes
	2	1	48 32	3	0.20	
		2	32 16	16	1.00	
		3	16 4	60	5.00	
		4	4 0	110	27.50	189
	3	1	48 32	3	0.20	
		2	32 16	16	1.00	
		3	16 4	90	7.50	
		4	4 0	120	30.00	229
	4	1	48 32	3	0.20	
		2	32 16	16	1.00	
		3	16 4	120	10.00	
		4	4 0	130	32.50	269
	5	1	48 32	3	0.20	
		2	32 16	16	1.00	
		3	16 4	140	11.67	
		4	4 0	130	32.50	299
	6	1	48 32	3	0.20	
		2	32 16	16	1.00	
		3	16 4	160	13.33	
		4	4 0	130	32.50	309
	7	1	48 32	3	0.20	
		2	32 16	16	1.00	
		3	16 4	170	14.17	
		4	4 0	130	32.50	319
	8	1	48 32	3	0.20	
		2	32 16	16	1.00	
		3	16 4	170	14.17	
		4	4 0	130	32.50	319
50	½	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	14	1.00	
		4	4 0	25	6.25	58
	1	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	40	2.86	
		4	4 0	35	8.75	94
	1½	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	55	3.93	
		4	4 0	90	22.50	164
	2	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	70	5.00	
		4	4 0	120	30.00	229
	3	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	100	7.14	
		4	4 0	130	32.50	249
	4	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	120	8.58	
		4	4 0	130	32.50	279
	5	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	160	11.42	
		4	4 0	130	32.50	309
	6	1	50 34	3	0.20	
		2	34 18	16	1.00	
		3	18 4	180	12.85	
		4	4 0	130	32.50	339

Do not interpolate, use next higher value for conditions not computed.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Appendix B

The information contained in the following pages is adapted from the U. S. Navy Diving Tables and is to be used when an employee will enter a compressed air environment more than once within a 12–hour period.

The Division may accept alternate methods of decompression for repetitive exposures provided the licensed physician submits his proposed procedures to the Division for its review and approval.

The Department of the Navy is in no way liable for the use or misuse of Tables 3, 4, and 5.

Pressure (psig)	Repetitive Groups															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Z
4	60	120	210	300												
7	35	70	110	160	225	350										
9	25	50	75	100	135	180	240	325								
11	20	35	55	75	100	125	160	195	245	315						
13	15	30	45	60	75	95	120	145	170	205	250	310				
16	5	15	25	40	50	60	80	100	120	140	160	190	220	270	310	
18	5	15	25	30	40	50	70	80	100	110	130	150	170	230	270	300
22	--	10	15	25	30	40	50	60	70	80	90	110	140	160	200	240
27	--	10	15	20	25	30	40	50	55	60	70	80	100	120	140	200
31	--	5	10	15	20	30	35	40	45	50	60	70	80	100	130	170
36	--	5	10	15	20	25	30	35	40	--	50	60	70	90	110	150
40	--	5	10	12	15	20	25	30	--	40	--	50	60	80	90	130
45	--	5	7	10	15	20	22	25	30	--	40	50	--	60	80	120
49	--	--	5	10	13	15	20	25	--	30	--	40	50	60	70	100

TABLE 3
INSTRUCTIONS FOR USE

The tabulated compressed air exposure times are in minutes. The times at the various pressures in each vertical column are the maximum exposures during which a compressed air worker will remain within the group listed at the head of the column.

To find the repetitive group designation enter the table on the exact or next greater working pressure than that to which exposed and select the listed exposure time exact or next greater than the actual exposure time. The repetitive group designation is indicated by the letter at the head of the vertical column where the selected exposure time is listed.

For example: An exposure in compressed air was for 45 minutes at 26 psig. To determine the repetitive group enter the table at 27 psig (the next greater tabulated exposure time, as 45 minutes is not listed), then move vertically to the top of the column where "H" is shown as the repetitive group.

OPEN AIR INTERVAL CREDIT TABLE

REPETITIVE GROUP AT END OF OPEN AIR INTERVAL															
	Z	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A
Z	0:10 0:22	0:34	0:48	1:02	1:18	1:36	1:55	2:17	2:42	3:10	3:45	4:29	5:27	6:56	10:05	12:00*
O		0:10 0:23	0:36	0:51	1:07	1:24	1:43	2:04	2:29	2:59	3:33	4:17	5:16	6:44	9:54	12:00*
N			0:10 0:24	0:39	0:54	1:11	1:30	1:53	2:18	2:49	3:22	4:04	5:03	6:32	9:43	12:00*
M				0:10 0:25	0:42	0:59	1:18	1:39	2:05	2:34	3:08	3:52	4:49	6:18	9:28	12:00*
L					0:10 0:26	0:45	1:04	1:25	1:49	2:19	2:53	3:36	4:35	6:02	9:12	12:00*
K						0:10 0:28	0:49	1:11	1:35	2:03	2:38	3:21	4:19	5:48	8:58	12:00*
J							0:10 0:31	0:54	1:19	1:47	2:20	3:04	4:02	5:40	8:40	12:00*
I								0:10 0:33	0:59	1:29	2:02	2:44	3:43	5:12	8:21	12:00*
H									0:10 0:36	1:06	1:41	2:23	3:20	4:49	7:59	12:00*
G										0:10 0:40	1:15	1:59	2:58	4:25	7:35	12:00*
F											0:10 0:45	1:29	2:28	3:57	7:05	12:00*
E												0:10 0:54	1:57	3:22	6:32	12:00*
D													0:10 1:09	2:38	5:48	12:00*
C														0:10 1:39	2:49	12:00*
B															0:10 2:10	12:00*
A																0:10 12:00*

REPETITIVE GROUP AT BEGINNING OF OPEN AIR INTERVAL (FROM TABLE 3)

TABLE 4

INSTRUCTIONS FOR USE

Open air interval time in the table is in hours and minutes (2:20 means 2 hours and 20 minutes). The open air interval must be at least 10 minutes. Find the repetitive group designation from Table 3 on the diagonal slope. Enter the table horizontally to select the listed open air interval time that is exactly or NEXT GREATER than the actual open air interval time. The repetitive group designation for the end of the open air interval is at the head of the vertical column where the selected open air interval time is listed. For example: A previous compressed air exposure was for 45 minutes at 30 psig. The compressed air worker decompresses according to Table 2 and remains in open air for 1 hour and 30 minutes and wishes to find the new repetitive group designation. From Table 3 the repetitive group at the start of the open air interval is "I". Now enter Table 4 at "I" on the diagonal slope and move horizontally to the column having 2:02 listed, which is the next greater time, since 1:30 in not tabulated. A sufficient amount of inert gas has now been lost to place the compressed air worker in group "F."

* Compressed air exposures following open air intervals of more than 12 hours are not considered multiple exposures. ACTUAL compressed air exposure time will be used for the determination of decompression time for open air intervals greater than 12 hours.

Repet. Group	Repetitive Exposure Pressure (psig)							
	18	22	27	31	36	40	45	49
A	7	6	5	4	4	3	3	3
B	17	13	11	9	8	7	7	6
C	26	21	17	15	13	11	10	10
D	37	29	24	20	18	16	14	13
E	49	38	30	26	23	20	18	16
F	61	47	36	31	28	24	22	20
G	73	56	44	37	32	29	26	24
H	87	66	52	43	38	33	30	27
I	101	76	61	50	43	38	34	31
J	116	87	70	57	48	43	38	34
K	138	99	79	64	54	47	43	38
L	161	111	88	72	61	53	48	42
M	187	124	97	80	68	58	52	47
N	213	142	107	87	73	64	57	51
O	241	160	117	96	80	70	62	55
Z	257	169	122	100	84	73	64	57

~~TABLE 5~~
~~INSTRUCTIONS FOR USE~~

~~The compressed air exposure times listed in this table are called "residual nitrogen times" and are the times a compressed air worker is to consider already spent in compressed air when starting a repetitive exposure to a specific pressure. They are in minutes.~~

~~Enter the table horizontally with the repetitive group designation from the Open Air Interval Credit Table (table 4). The time in each vertical column is the number of minutes that would be required (at the pressure listed at the head of the column) to saturate to the particular group.~~

~~For example: The final group designation from the Open Air Interval Credit Table (table 4) on the basis of a previous exposure and open air interval is "H." It is planned to re–enter compressed air at a pressure of 42 psig. What time must be added to the actual time spent in compressed air? Enter table 5 on row H. Since 42 psig is greater than 40 psig but less than 45 psig, use the longer time of 33 minutes. This means that the compressed air worker enters the compressed air environment as though the worker had already been at 42 psig for 33 minutes.~~

~~The exposure time listed in table 5 is added to the actual time spent in compressed air. Decompression is carried out based on the sum of the actual exposure time and the time from table 5 for the pressure encountered.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

NOTE:

All Sections and Appendices A and B in Subchapter 3, CASO, are proposed for transfer/relocation to Group 26 of Subchapter 7, GISO, without substantive changes.

The gray highlighting indicates proposed non-substantive change(s) to original section language.

The rectangle in the left margin identifies the section number of origin.

Amend Subchapter 7, Group 26 of GISO, the following Sections, and Appendices A and B, as follows:

Group 26. Diving and Pressurized Worksite Operations

NOTE:

The gray highlighting indicates proposed non-substantive change(s) to original section language.

The rectangle in the left margin identifies the section number of origin.

Article 154. Pressurized Worksite Operations

§ 1200

§6070. Application ~~of Orders~~.

The ~~following~~ Orders in this Article shall apply ~~for places of employment in California~~ whenever persons are employed in compressed air, exclusive of diving work. ~~Machines, equipment, processes, safety devices, and operations not specifically covered by these Orders shall be governed by other applicable safety orders.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§ 1204

§6074. Definitions.

The following definitions shall apply in the application of these Orders.

Air Lock (Personnel): A chamber through which employees pass from one air pressure environment into another.

Bulkhead: An airtight structure separating the working chamber from free air or from another chamber under a different pressure than the working pressure.

Caisson: A wood, steel, concrete or reinforced air and water-tight chamber in which it is possible for employees to work under air pressure greater than atmospheric pressure.

Compressed Air Environment (Hyperbaric Condition): A work site where the ambient pressure is greater than the atmospheric pressure at the entrance to the work site.

Decanting (surface decompression): A method used for decompressing under certain circumstances. In this procedure the workers are brought to atmospheric pressure with a

very high gas tension in the tissues and then immediately re-compressed in a second and separate chamber or lock.

Division: The current Division of Occupational Safety and Health, any predecessors, or any subsequent successor agency.

Emergency Locks: A lock designed to hold and permit the quick passage of an entire shift of employees.

High Air: Air pressure used to supply power to pneumatic tools and devices.

§ 1204

Low Air: Air supplied to pressurize working chambers and locks.

Materials Lock: An air lock through which materials and equipment pass from one air pressure environment into another.

Hyperbaric Chamber: A chamber in which employees are treated for decompression sickness and/or air embolism. It may also be used in pre-employment physical examinations to determine the adaptability of the prospective employee to changes in pressure.

Normal Condition: One during which exposure to compressed air is limited to a single continuous working period followed by a single decompression in any given 24-hour period; the total time of exposure to compressed air during the single continuous is not interrupted by exposure to normal atmospheric pressure, and a second exposure to compressed air does not occur until at least 12 consecutive hours of exposure to normal atmospheric pressure have elapsed since the worker has been under pressure.

Pressure: A force acting on a unit area. Usually shown as pounds per square inch (psi).

Absolute Pressure (psi): The sum of the atmospheric pressure and gauge pressure (psig).

Ambient Pressure: Encompassing pressure surrounding all sides.

Atmospheric Pressure: The pressure of air at sea level, usually 14.7 psi (one atmosphere), or 0 Psig.

Gauge Pressure (psig): That pressure measured by a gauge and indicating the pressure exceeding atmospheric.

Safety Screen: An air- and water-tight diaphragm placed across the upper part of a compressed air tunnel between the face and bulkhead, in order to prevent flooding the crown of the tunnel between the safety screen and the bulkhead, thus providing a safe means of refuge and exit from a flooding or flooded tunnel.

Special Decompression Chamber: A chamber to provide greater comfort for employees when the total decompression time exceeds 75 minutes.

Working Chamber: The space or compartment under air pressure in which the work is being done.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§6075. General Provisions.

(a) No work, where persons are employed in compressed air, shall be started until 7 days after the firm, corporation, commission, or person undertaking such work has notified, in writing, the Division of such contemplated work.

§ 1205

(b) The employer shall ensure that a competent person, who is familiar with these and other applicable safety orders, is present at the work site at all times when employees are required to work in a compressed air environment.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§ 1210

§6080. Compression Rate.
(a) During the compression of employees, the pressure shall not be increased to more than 3 psig within the first minute. The pressure shall be held at 3 psig and again at 7 psig sufficiently long to determine if any individuals are experiencing discomfort. After the first minute the pressure is to be raised uniformly and at a rate not to exceed 10 psi per minute. If any employees complain of discomfort, the pressure will be held to determine if the symptoms are relieved. If after 5 minutes the discomfort does not disappear, the lock attendant shall gradually reduce the pressure, until the employee signals that the discomfort has ceased. If the employee does not indicate that the discomfort has disappeared, the lock attendant shall reduce the pressure to atmospheric and the employee shall be released from the lock.
(b) No employee shall be subjected to pressure exceeding 50 pounds per square inch except in an emergency.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§ 1215

§6085. Decompression for Normal Conditions.
Decompression for normal condition shall be in accordance with the Decompression Tables. (See Decompression Table No. 1 and No. 2 in Appendix A.)
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§ 1216

§6087. Decompression After Repetitive Exposures.
In the event it is necessary for an employee to be in compressed air more than once in a 24-hour period, the appointed physician shall be responsible for the establishment of methods and procedures of decompression applicable to repetitive exposures. (See Appendix B.)
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§ 1217

§6089. Decompression by Decanting.
If decanting is necessary, the appointed physician shall establish procedures before anyone is permitted to be decompressed by decanting methods. The period of time that the employees spend at atmospheric pressure between the Recompression following the shift and recompression shall not exceed 5 minutes.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§ 1220

§6090. Air Locks.
(a) Except in emergency, no employees employed in compressed air shall be permitted to pass from the working chamber to atmospheric pressure until after decompression, in accordance with the procedures in either Appendix A, Appendix B, or Section ~~1217~~ 6089.
(b) The time of decompression shall be posted in each air lock.
(c) The lock attendant shall be under the direct supervision of the physician required by Section ~~1280~~,6120 and stationed at the lock controls on the free air side during the

period of compression and decompression. The lock attendant shall remain at the lock control station whenever there are employees in the working chamber or in the air lock.
(d) Except where air pressure in the working chamber is below 12 psig, each air lock shall be equipped with suitable automatic controls which automatically regulate decompressions. It shall also be equipped with manual controls to permit the lock attendant to override the automatic system in the event of an emergency.

§ 1220

(e) A manual control, which can be used in the event of an emergency, shall be placed inside the air lock.
(f) For each 8-hour shift, a record of employees employed under compressed air shall be kept by the lock attendant. This record shall show period of stay in the working chamber of each employee and the time taken for decompression.
(g) A clock, thermometer, and continuous recording pressure gauge with a 4-hour graph shall be installed outside of each air lock and shall be changed prior to each shift's decompression. The chart shall be of sufficient size to register a legible record of variations in pressure within the air lock and shall be visible to the lock attendant. A copy of each graph shall be submitted to the physician after each shift. In addition, a pressure gauge, clock, and thermometer shall also be installed in each air lock. Additional fittings shall be provided so that test gauges may be attached whenever necessary.
(h) Except where air pressure is below 12 psig and there is no danger of rapid flooding, all caissons having a working greater than 150 square feet and each bulkhead in tunnels of 14 feet or more in diameter, or equivalent area, shall have at least 2 locks in perfect working condition, 1 of which shall be used exclusively as an air lock. Where only a combination air and materials lock is required, this single lock shall be of sufficient capacity to hold the employees constituting two successive shifts. If emergency locks are provided, they shall be large enough to hold an entire heading shift and a limit maintained of 12 psig. There shall be a chamber available for oxygen decompression therapy to 28 psig.
(i) The air lock shall be large enough so that those using it are not compelled to be in a cramped position, and shall not have less than 5 feet clear head room at the center and a minimum of 30 cubic feet of air space per occupant.

§ 1220

(j) Locks on caissons shall be so located that the bottom door shall be not less than 3 feet above the water level surrounding the caisson on the outside. (Note: The water level, where it is affected by tides, is construed to mean high tide.)
(k) In addition to the pressure gauge in the locks, an accurate pressure gauge shall be maintained on the outer and inner side of each bulkhead. These gauges shall be accessible at all times and shall be kept in accurate working order.
(l) Air locks shall be illuminated and shall have an observation port at least 4 inches in diameter located in such a position that all occupants of the air lock may be observed from the working chamber and from the free air side of the lock.
(m) Air locks shall be maintained at a minimum temperature of 70 degrees Fahrenheit, dry bulb.
(n) When locks are not in use and employees are in the working chamber, lock doors shall be kept open to the working chamber, where practicable.
(o) All locks shall be constructed in accordance with the Unfired Pressure Vessel Safety Orders of the Division.

(p) Adequate ventilation shall be provided in accordance with ~~the CCR, Title 8,~~ Section 5143 ~~of the General Industry Safety Orders.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§6095. Special Decompression Chamber.
(a) General. A special decompression chamber of sufficient size to accommodate the entire force of employees being decompressed at the end of a shift shall be provided whenever the regularly established working period requires a total time of decompression exceeding 75 minutes.

§ 1225

(b) Size, Capacity, and Construction. The headroom in the special decompression chamber shall be not less than 7 feet and the cubical content shall provide at least 50 cubic feet of air space for each person. For each occupant there shall be provided 4 square feet of free walking area and 3 square feet of seating space exclusive of area required for lavatory and toilet facilities. The rated capacity shall be based on the stated minimum space per person and shall be posted at the chamber entrance. The posted capacity shall not be exceeded, except in case of emergency. The chamber shall be constructed in accordance with the Unfired Pressure Vessel Safety Orders.
(c) Equipment. Each special decompression chamber shall be equipped with the following:
(1) A clock or clocks suitably placed so that the attendant and the chamber occupants can readily ascertain the time;
(2) Pressure gauges which will indicate to the attendants and to the chamber occupants the pressure in the chamber;
(3) Valves to enable the attendant to control the supply and discharge of compressed air into and from the chamber;
(4) Valves and pipes in connection with the air supply and exhaust arranged so that the chamber pressure can be controlled from within and without;
(5) Effective means of oral communication between the attendant, occupants of the chamber, and the air compressor plant;
(6) An observation port at the entrance to permit observation of the chamber occupants
(7) Suitable mufflers at large air pressure drops.
(d) Seating Facilities. Seating facilities in special decompression chambers shall so arranged as to permit a normal sitting posture. Seating space not less than 18 inches by 24 inches wide shall be provided per occupant.
(e) Automatic Controls. Special decompression chambers shall be equipped with automatic controls complying with Section 1220(d) and (e).

§ 1225

(f) Sanitation. Adequate toilet and washing facilities in a screened or enclosed recess shall be provided. Toilet bowls shall have a built-in protector on the rim so that an air space is created when the seat lid is closed. Potable drinking water shall be provided. This may be accomplished by either piping water into the special decompression chamber and providing drinking fountains, or by providing individual canteens or by some other sanitary means. Common drinking vessels shall be prohibited. The chamber shall be kept clean.
(g) Location. Unless the special decompression chamber is serving as the air lock to atmospheric pressure, the special decompression chamber shall be situated where

practicable, adjacent to the air lock on the atmospheric pressure side of the bulkhead. A passageway shall be provided connecting the special chamber with the air lock to permit employees in the process of decompression to move from the air lock to the special chamber without a reduction in the ambient pressure from that designated for the next stage of decompression. The passageway shall be so arranged as to not interfere with the normal operation of the air lock nor with the release of the occupants of the special chamber to atmospheric pressure upon the completion of the decompression procedure.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§6100. Temperature, Illumination, Sanitation and Ventilation.
(a) Temperature of all working chambers which are subjected to compressed air shall, by means of after-coolers or other suitable devices, be maintained at a temperature not to exceed 85 degrees Fahrenheit.
(b) Illumination in compressed air chambers shall be by electricity exclusively and two independent electric-lighting systems with independent sources of supply shall be used. The emergency source shall be arranged to become automatically operative in the event of failure of the regularly used source. Electrical installations and equipment shall comply with applicable portions of the Electrical Safety Orders in Title 8 of the CCR.
(c) The minimum intensity of illumination on any walkway, ladder, stairway, or working level shall not be less than 10-foot candles, and in all work places the illumination shall at all times be such as to enable employees to see clearly.

§ 1230

(d) Sanitary, heated, illuminated, and ventilated dressing rooms and drying rooms shall be provided for all employees engaged in compressed air work. Such rooms shall contain suitable benches and lockers. Bathing accommodations (showers at the ratio of 1 to 10 employees per shift) equipped with running hot and cold water along with suitable and adequate toilet accommodations shall be provided. One toilet for each 15 employees, or fractional part thereof, shall be provided. While in a compressed air environment and the toilet bowl is shut by a cover, there shall be an air space so that the bowl or bucket does not implode when the pressure is increased. All parts of caissons and other working compartments shall be kept in a sanitary condition.
(e) Ventilation in the locks and chambers, with the exception of the medical chamber, shall be such that the air quality meets the requirement of Section 5144(e) ~~of the General Industry Safety Orders~~.
(f) Exhaust valves and exhaust pipes shall be provided and operated so that the working chamber shall be well ventilated, and there shall be no pockets of dead air. Outlets may be required at intermediate points along the main low pressure air supply line to the heading to eliminate such pockets of dead air. Ventilating air shall be not less than 30 cubic feet per minute per person.
(g) The air in the workplace shall be analyzed by the employer not less than once each shift, and records of such tests shall be kept on file at the place where the work is in progress. The test results shall be within the permissible exposure limits (PEL's) specified in the ~~CCR, Title 8,~~ Section 5155 ~~of the General Industry Safety Orders~~, for hazardous gases and within 10 percent of the lower explosive limit of flammable gases.
(h) Forced ventilation shall be provided during decompression. During the entire decompression period, forced ventilation through chemical or mechanical air purifying devices that will ensure a source of fresh air shall be provided.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§6105. Compressor Plant, Air Supply and Telephone Communication.
(a) There shall at all times be a qualified gauge tender on duty at the air control valves to regulate the pressure in the working areas. During tunneling operations, one gauge tender may regulate the pressure in not more than two headings provided that the gauges and controls are all in one location. In caisson work there shall be a gauge tender for each caisson.
§ 1240
(b) The low air compressor plant shall be of sufficient capacity to not only permit the work to be done safely, but shall provide a margin to meet anticipated emergencies and repairs.
(c) Low air compressor units shall have at least two independent and separate sources of power supply. Each independent and separate source of power supply shall be capable of operating the entire low air plant and its accessory systems.
(d) The capacity, arrangement, and number of compressors shall be sufficient to maintain the necessary pressure without overloading the equipment and to assure maintenance of such pressure in the working chamber during periods of breakdown, repair, or emergency.
(e) Switching from one independent source of power supply to the other shall be done periodically to ensure the workability of the apparatus in an emergency.
(f) Duplicate low pressure air feed lines and regulating valves shall be provided between the source of air supply and a point beyond the locks with one of the lines extending to within 100 feet of the working face.
(g) To prevent rapid decompression all air supply lines shall be equipped with check valves.
(h) Low pressure air shall be regulated automatically. In addition, manually operated valves shall be provided for emergency conditions.
(i) The air intakes for all air compressors shall be located at a place where fumes, exhaust gases, and other air contaminants will be at a minimum.
§ 1240
(j) Gauges indicating the pressure in the working chamber shall be installed in the compressor building, the lock attendant's station, and at the Field Office of the employer's representative.
(k) There shall be effective communication at all times between the following:
(1) The working chamber face;
(2) The working chamber side of the air lock near the door;
(3) The interior of the air lock;
(4) Lock attendants station;
(5) The compressor plant;
(6) The first-aid station;
(7) The emergency lock (if one is required);
(8) The special decompression chamber (if one is required).
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§6110. Bulkheads and Screens.

§ 1250

(a) Intermediate bulkheads with locks or intermediate safety screens or both shall be required where there is the danger of rapid flooding.
(b) In tunnels 16 feet or more in diameter, hanging walkways shall be provided from the face to the air lock, as high in the tunnel as practicable, with at least 6 feet of head room. Walkways shall be constructed of noncombustible material. Standard railing shall be securely installed throughout the length of all walkways on open sides. Where walkways are ramped under safety screens, the walkway surface shall be skidproofed by cleats or equivalent means.
(c) Bulkheads used to contain compressed air shall be tested, where practicable, to prove their ability to resist the highest air pressure which may be expected to be used.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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§6115. Fire Prevention.
(a) Tunnels shall be provided with a 2-inch minimum diameter water line extending into the working chamber and to within 100 feet of the working face. Such line shall have hose outlets with 100 feet of fire hose properly attached and maintained as follows: one at the working face; one immediately inside the bulkhead of the working chamber; and one immediately outside such bulkhead. In addition, hose outlets shall be provided at 200-foot intervals throughout the length of the tunnel and 100 feet of fire hose shall be attached to the outlet nearest to any location where flammable material is being kept or stored or where any flame is being used.
(b) Fire hose shall be at least 11/2 inches in nominal diameter. Water pressure shall at all times be adequate for efficient operation of the type of nozzle used and the water supply shall be such as to ensure an uninterrupted flow. Fire hose, when not in use, shall be located or guarded to prevent injury thereto.
(c) In addition to fire hose protection required by this section, on every floor of every building not under compressed air, but used in connection with the compressed air work, there shall be provided at least one approved extinguisher of the proper type for the hazard involved. At least two approved fire extinguishers shall be provided in the working chamber as follows: one at the working face and one immediately inside the bulkhead (pressure side). Extinguishers in the working chamber shall use water as the primary extinguishing agent and shall not use any extinguishing agent which could be harmful to the employees in the working chamber. The fire extinguisher shall be protected from damage.
(d) No persons shall be permitted to smoke or carry smoking materials in compressed air.
(e) While welding or flame cutting is being done in compressed air, a watch person with a fire hose or approved extinguisher shall stand by until such operation is completed.
(f) Highly combustible materials shall not be used or stored in the working chamber. Wood, paper, and similar combustible material shall not be used in the working chamber in quantities which could cause a fire hazard. The compressor building shall be constructed of noncombustible materials.
(g) Air locks shall be equipped with a manual-type fire extinguisher system that can be activated inside the air lock and also by the outside lock attendant. In addition, a fire hose and portable fire extinguisher shall be provided inside and outside the air lock. The portable fire extinguisher shall be the dry chemical type.

(h) Equipment, fixtures, and furniture in air locks and special decompression chambers shall be constructed of noncombustible materials. Bedding and other furnishings shall be chemically treated so as to be fire-resistant.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§6120. Medical Control.
(a)(1) There shall be retained 1 or more physicians licensed in the State of California familiar with and experienced in the physical requirements for the medical aspects of compressed air work. The physician shall be available at all times while work is in progress in order to provide medical supervision of employees employed in compressed air work. The physician shall meet the physical qualifications of a compressed air worker and be willing to enter a pressurized environment.
(2) No employee shall be permitted to enter a compressed air environment until qualified by a physician in accordance with Section 6053 ~~of the General Industry Safety Orders~~.
(3) An oxygen tolerance test shall be passed by all persons engaged in compressed air work.
(4) In the event an employee is absent from work for 10 or more consecutive days the employee shall be determined to be medically fit to resume compressed air work by the physician.
(5) Medical records shall be kept as required by applicable parts of Section 6058 ~~of the General Industry Safety Orders~~.

§ 1280

(b) Except when the air pressure in the working chamber is below 14 psig a medical chamber shall be established and maintained in immediate working order.
The medical chamber shall:
(1) Have at least six feet of clear headroom at the center, and be subdivided into not less than two compartments.
(2) Be readily accessible to employees working under compressed air.
(3) Be kept ready for immediate use for at least five hours subsequent to the emergence of any employee from the working chamber.
(4) Be properly heated, lighted and ventilated.
(5) Be maintained in a sanitary condition.
(6) Have a non-shatterable port through which the occupant(s) may be kept under constant observation.
(7) Be constructed and tested in accordance with the Unfired Pressure Vessel Safety Orders; the medical lock shall be retested whenever it has been out of service for more than 1 year and whenever it is moved from one location to another.
(8) Be designed for a working pressure of 75 psig.
(9) Be equipped with internal controls which may be overridden by external controls.
(10) Be provided with air pressure gauges to show the air pressure within each compartment to observers inside and outside the medical chamber.
(11) Be equipped with a quick acting automatic sprinkler system.
(12) Be provided with oxygen lines and fittings leading into external tanks. The lines shall be fitted with check valves to prevent reverse flow.
(13) Be in constant charge of an attendant under the direct control of the retained physician. The attendant shall be trained in the use of the chamber and suitably

instructed regarding steps to be taken in the treatment of employees exhibiting symptoms compatible with a diagnosis of decompression sickness.

(14) Be located adjacent to an emergency medical facility. The emergency medical facility shall be equipped, as required by the retained physician, with approved demand type oxygen inhalation equipment.

(15) Be capable of being maintained at a temperature, in use, not to exceed 90 degrees Fahrenheit nor be less than 70 degrees Fahrenheit.

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(16) Be provided with sources of oil free air, both normal and emergency, which are capable of raising the air pressure in the chamber from 0 to 75 psig in five minutes.

(c) Identification badges shall be furnished to all employees, indicating that the wearer is a compressed air worker. The badge shall give employee's name, address of the medical chamber, the phone number of the licensed physician for the compressed air project, and contain instructions that in case of an emergency of unknown or doubtful cause or illness, the wearer shall be rushed to the medical chamber. The badge shall be worn at all times off the job as well as on the job.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

NOTE:

- Appendix A is proposed for transfer from Subchapter 3, CASO, in its entirety.
- The gray highlighting indicates proposed non-substantive change(s) to original language or data.
- Tables No. 1 and 2 are proposed for reformatting to improve clarity pursuant to the Title 8 Reform Project.

Appendix A

Transferred from CASO, Article 12. New to GISO

Decompression Tables

1. EXPLANATION. The decompression tables are computed for working chamber pressures from 0 to 14 pounds, and from 14 to 50 pounds per square inch gauge inclusive by 2-pound increments and for exposure times for each pressure extending from 1/2 to over 8 hours inclusive. Decompressions will be conducted by 2 or more stages with a maximum of 4 stages, the latter for a working chamber pressure of 40 pounds per square inch gauge or over.

Stage 1 consists of a reduction in ambient pressure ranging from 10 to a maximum of 16 pounds per square inch, but in no instance will the pressure be reduced below 4 pounds at the end of stage 1. This reduction in pressure in stage I will always take place at a rate not greater than 5 pounds per minute.

Further reduction in pressure will take place during stage 2 and subsequent stages as required at a slower rate, but in no event at a rate greater than 1 pound per minute.

Decompression Table No. 1 indicates in the body of the table the total decompression time in minutes for various combinations of working chamber pressure and exposure time.

Decompression Table No. 2 indicates for the same various combinations of working chamber pressure and exposure time the following:

a. The number of stages required;

b. The reduction in pressure and the terminal pressure for each required stage;

c. The time in minutes through which the reduction in pressure is accomplished for each required stage;

d. The pressure reduction rate in minutes per pound for each required stage;

IMPORTANT NOTE: THE PRESSURE REDUCTION IN EACH STAGE IS ACCOMPLISHED AT A UNIFORM RATE. DO NOT INTERPOLATE BETWEEN VALUES SHOWN ON THE TABLES. USE THE NEXT HIGHER VALUE OF WORKING CHAMBER PRESSURE OR EXPOSURE TIME SHOULD THE ACTUAL WORKING CHAMBER PRESSURE OR THE ACTUAL EXPOSURE TIME, RESPECTIVELY, FALL BETWEEN THOSE FOR WHICH CALCULATED VALUES ARE SHOWN IN THE BODY OF THE TABLES.

Examples:

Example No. 1

4 hours working period at 20 pounds gauge

Decompression Table No. 1

Transferred from CASO, Article 12. New to GISO

20 pounds for 4 hours,
Total Decompression Time .....……..…..... 43 minutes

Decompression Table No. 2

Stage 1

Reduce pressure from 20 pounds to 4 pounds at the uniform rate of 5 pounds per minute.
Elapsed time Stage 1: 16/5 .....……..... 3 minutes

Stage 2 (final stage)

Reduce pressure at a uniform rate from 4 pounds to 0 pound gauge over a period of 40 minutes.
Rate -- 0.10 pounds per minute or 10.00 minutes per pound
Stage 2 (final) elapsed time.....…….……..…….. 40 minutes

Total Time .....……..... 43 minutes

Example No. 2

5-hour working period at 24 pounds gauge

Decompression Table No. 1

24 pounds for 5 hours
Total Decompression Time .....……..... 117 minutes

Decompression Table No. 2

Stage 1

Reduce pressure from 24 pounds to 8 pounds at the uniform rate of 5 pounds per minute
Elapsed time, Stage 1: 16/5 .....……..... 3 minutes

Stage 2

Reduce pressure at a uniform rate from 8 pounds to 4 pounds over a period of 4 minutes.
Rate, 1 pound per minute
Elapsed time, Stage 2 .....……..... 4 minutes

Transfer persons to Special Decompression Chamber maintaining the 4-pound pressure during the transfer operation.

Stage 3 (final stage)

In the Special Decompression Chamber, reduce the pressure at a uniform rate from 4 pounds to 0 pound gauge over a period of 110 minutes.
Rate, 0.037 pounds per minute or 27.5 minutes per pound
Stage 3 (final) elapse time.....……...……..……. 110 minutes

Total Time .....……..…..... 117 minutes

NOTE: Table No. 1 of Appendix A is proposed for transfer from Subchapter 3, CASO, Appendix A, Table No. 1. Table No. 1 is proposed for reformatting to improve clarity pursuant to the Title 8 Reform Project.

Transferred from CASO, Article 12. New to GISO

DECOMPRESSION TABLE NO. 1
Total Decompression Time – Minutes

Work Pressure	**Working Period (Hours)**										
psig	½	1	1 ½	2	3	4	5	6	7	8	Over 8
0-12	3	3	3	3	3	3	3	3	3	3	3
14	6	6	6	6	6	6	6	6	16	16	32
16	7	7	7	7	7	7	17	33	48	48	62
18	7	7	7	8	11	17	48	63	63	73	87
20	7	7	8	15	15	43	63	73	83	103	113
22	9	9	16	24	38	68	93	103	113	128	133
24	11	12	23	27	52	92	117	122	127	137	151
26	13	14	29	34	69	104	126	141	142	142	163
28	15	23	31	41	98	127	143	153	153	165	183
30	17	28	38	62	105	143	165	168	178	188	204
32	19	35	43	85	126	163	178	193	203	213	226
34	21	39	58	98	151	178	195	218	223	233	248
36	24	44	63	113	170	198	223	233	243	253	273
38	28	49	73	128	178	203	223	238	253	263	278
40	31	49	84	143	183	213	233	248	258	278	288
42	37	56	102	144	189	215	245	260	263	268	293
44	43	64	118	154	199	234	254	264	269	269	293
46	44	74	139	171	214	244	269	274	299	299	318
48	51	89	144	189	229	269	299	309	319	319	---
50	58	94	164	209	249	279	309	329	---	---	---

NOTE: Table No. 2 of Appendix A is proposed for transfer from Subchapter 3, CASO, Appendix A, Table No. 2. Table No. 2 is proposed for reformatting to improve clarity pursuant to the Title 8 Reform Project.

DECOMPRESSION TABLE NO. 2

Transferred from CASO, Article 12. New to GISO

Working chamber pressure	**Decompression data**						
	Working period	Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
14	1/2	1	14	4	2	0.20	
		2	4	0	4	1.00	6
	1	1	14	4	2	0.20	
		2	4	0	4	1.00	6
	1 1/2	1	14	4	2	0.20	
		2	4	0	4	1.00	6
	2	1	14	4	2	0.20	
		2	4	0	4	1.00	6
	3	1	14	4	2	0.20	
		2	4	0	4	1.00	6
	4	1	14	0	2	0.20	
		2	4	0	4	1.00	6
	5	1	4	4	2	0.20	
		2	4	0	4	1.00	6
	6	1	14	4	2	0.20	
		2	4	0	4	1.00	6
	7	1	14	4	2	0.20	
		2	4	0	14	3.50	16
	8	1	14	4	2	0.20	
		2	4	0	14	3.50	16
	Over 8	1	14	4	2	0.20	
		2	4	0	30	7.50	32
16	1/2	1	16	4	3	0.20	
		2	4	0	4	1.00	7
	1	1	16	4	3	0.20	
		2	4	0	4	1.00	7
	1 1/2	1	16	4	3	0.20	
		2	4	0	4	1.00	7
	2	1	16	4	3	0.20	
		2	4	0	4	1.00	7
	3	1	16	4	3	0.20	
		2	4	0	4	1.00	7
	4	1	16	0	3	0.20	
		2	4	0	4	1.00	7

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

	Decompression data						
Working chamber pressure psig	Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	5	1	16	4	3	0.20	
		2	4	0	4	3.50	17
	6	1	16	4	3	0.20	
		2	4	0	30	7.50	33
	7	1	16	4	3	0.20	
		2	4	0	45	11.25	48
	8	1	16	4	3	0.20	
		2	4	0	45	11.25	48
	Over 8	1	16	4	3	0.20	
		2	4	0	60	15.00	63
18	1/2	1	18	4	3	0.20	
		2	4	0	4	1.00	7
	1	1	18	4	3	0.20	
		2	4	0	4	1.00	7
	1 1/2	1	18	4	3	0.20	
		2	4	0	4	1.00	7
	2	1	18	4	3	0.20	
		2	4	0	5	1.25	8
	3	1	18	4	3	0.20	
		2	4	0	8	2.00	11
	4	1	18	0	3	0.20	
		2	4	0	14	3.50	17
	5	1	18	4	3	0.20	
		2	4	0	45	11.25	48
	6	1	18	4	3	0.20	
		2	4	0	60	15.00	63
	7	1	18	4	3	0.20	
		2	4	0	60	15.00	63

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	8	1	18	4	3	0.20	
		2	4	0	70	17.50	73
	Over 8	1	18	4	3	0.20	
		2	4	0	84	21.00	87
20	1/2	1	20	4	3	0.20	
		2	4	0	4	1.00	7
	1	1	20	4	3	0.20	
		2	4	0	4	1.00	7
	1 1/2	1	20	4	3	0.20	
		2	4	0	5	1.25	8
	2	1	20	4	3	0.20	
		2	4	0	12	3.00	15
	3	1	20	4	3	0.20	
		2	4	0	12	3.00	15
	4	1	20	4	3	0.20	
		2	4	0	40	10.00	43
	5	1	20	4	3	0.20	
		2	4	0	60	15.00	63
	6	1	20	4	3	0.20	
		2	4	0	70	17.50	73
	7	1	20	4	3	0.20	
		2	4	0	80	20.00	83
	8	1	20	4	3	0.20	
		2	4	0	100	25.00	103
	Over 8	1	20	4	3	0.20	
		2	4	0	110	27.50	113

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Decompression data						
	Working period	Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
22	1/2	1	22	6	3	0.20	
		2	6	0	6	1.00	9
	1	1	22	6	3	0.20	
		2	6	0	6	1.00	9
	1 1/2	1	22	6	3	0.20	
		2	6	0	13	2.20	16
	2	1	22	6	3	0.20	
		2	6	0	21	3.50	24
	3	1	22	6	3	0.20	
		2	6	0	35	5.85	38
	4	1	22	6	3	0.20	
		2	6	0	65	10.83	68
	5	1	22	6	3	0.20	
		2	6	0	90	15.00	93
	6	1	22	6	3	0.20	
		2	6	0	100	16.67	103
	7	1	22	6	3	0.20	
		2	6	0	110	18.35	113
	8	1	22	6	3	0.20	
		2	6	0	125	20.80	128
	Over 8	1	22	6	3	0.20	
		2	6	0	130	21.70	133
24	1/2	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	4	1.00	11
	1	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	5	1.25	12

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	1 1/2	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	16	4.00	23
	2	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	20	5.00	27
	3	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	45	11.25	52
	4	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	85	21.25	92
	5	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	110	27.50	117
	6	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	115	28.80	122
	7	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	120	30.00	127
	8	1	24	8	3	0.20	
		2	8	4	4	1.00	
		3	4	0	130	32.50	137
	Over 8	1	24	8	3	0.20	
		2	8	4	8	2.00	
		3	4	0	140	35.00	151
26	1/2	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	4	1.00	13

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Transferred from CASO, Article 12. New to GISO

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	1	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	5	1.25	14
	1 1/2	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	20	5.00	29
	2	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	25	6.25	34
	3	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	60	15.00	69
	4	1	26	10	3	0.20	
		2	10	4	6	1.00	
		3	4	0	95	23.75	104
	5	1	26	10	3	0.20	
		2	10	4	8	1.33	
		3	4	0	115	28.80	126
	6	1	26	10	3	0.20	
		2	10	4	8	1.33	
		3	4	0	130	32.50	141
	7	1	26	10	3	0.20	
		2	10	4	9	1.50	
		3	4	0	130	32.50	142
	8	1	26	10	3	0.20	
		2	10	4	9	1.50	
		3	4	0	130	32.50	142
	Over 8	1	26	10	3	0.20	
		2	10	4	30	5.00	
		3	4	0	130	32.50	163

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
28	1/2	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	4	1.00	15
	1	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	12	3.00	23
	1 1/2	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	20	5.00	31
	2	1	28	12	3	0.20	
		2	12	4	8	1.00	
		3	4	0	30	7.50	41
	3	1	28	12	3	0.20	
		2	12	4	10	1.25	
		3	4	0	85	21.20	98
	4	1	28	12	3	0.20	
		2	12	4	14	1.75	
		3	4	0	110	27.50	127
	5	1	28	12	3	0.20	
		2	12	4	20	2.50	
		3	4	0	120	30.00	143
	6	1	28	12	3	0.20	
		2	12	4	20	2.50	
		3	4	0	130	32.50	153
	7	1	28	12	3	0.20	
		2	12	4	20	2.50	
		3	4	0	130	32.50	153
	8	1	28	12	3	0.20	
		2	12	4	32	4.00	
		3	4	0	130	32.50	165
	Over 8	1	28	12	3	0.20	
		2	12	4	50	6.25	
		3	4	0	130	32.50	183

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
30	1/2	1	30	14	3	0.20	
		2	14	4	10	1.00	
		3	4	0	4	1.00	17
	1	1	30	14	3	0.20	
		2	14	4	10	1.00	
		3	4	0	15	3.75	28
	1 1/2	1	30	14	3	0.20	
		2	14	4	10	1.00	
		3	4	0	25	6.25	38
	2	1	30	14	3	0.20	
		2	14	4	14	1.40	
		3	4	0	45	11.25	62
	3	1	30	14	3	0.20	
		2	14	4	17	1.70	
		3	4	0	85	21.20	105
	4	1	30	14	3	0.20	
		2	14	4	30	3.00	
		3	4	0	110	27.50	143
	5	1	30	14	3	0.20	
		2	14	4	35	3.50	
		3	4	0	130	32.50	165
	6	1	30	14	3	0.20	
		2	14	4	35	3.50	
		3	4	0	130	32.50	168
	7	1	30	14	3	0.20	
		2	14	4	45	4.50	
		3	4	0	130	32.50	178
	8	1	30	14	3	0.20	
		2	14	4	55	5.50	
		3	4	0	130	32.50	188
	Over 8	1	30	14	3	0.20	
		2	14	4	71	7.10	
		3	4	0	130	32.50	204

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
32	1/2	1	32	16	3	0.20	
		2	16	4	12	1.00	
		3	4	0	4	1.00	19
	1	1	32	16	3	0.20	
		2	16	4	12	1.00	
		3	4	0	20	5.00	35
	1 1/2	1	32	16	3	0.20	
		2	16	4	15	1.25	
		3	4	0	25	6.25	43
	2	1	32	16	3	0.20	
		2	16	4	22	1.83	
		3	4	0	60	15.00	85
	3	1	32	16	3	0.20	
		2	16	4	28	2.33	
		3	4	0	95	23.75	126
	4	1	32	16	3	0.20	
		2	16	4	40	3.33	
		3	4	0	120	30.00	163
	5	1	32	16	3	0.20	
		2	16	4	45	3.75	
		3	4	0	130	32.50	178
	6	1	32	16	3	0.20	
		2	16	4	60	5.00	
		3	4	0	130	32.50	193
	7	1	32	16	3	0.20	
		2	16	4	70	5.83	
		3	4	0	130	32.50	203
	8	1	32	16	3	0.20	
		2	16	4	80	6.67	
		3	4	0	130	32.50	213
	Over 8	1	32	16	3	0.20	
		2	16	4	93	7.75	
		3	4	0	130	32.50	226

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
34	1/2	1	34	18	3	0.20	
		2	18	4	14	1.00	
		3	4	0	4	1.00	21
	1	1	34	18	3	0.20	
		2	18	4	14	1.00	
		3	4	0	22	5.50	39
	1 1/2	1	34	18	3	0.20	
		2	18	4	25	1.80	
		3	4	0	30	7.50	58
	2	1	34	18	3	0.20	
		2	18	4	35	2.50	
		3	4	0	60	15.00	98
	3	1	34	18	3	0.20	
		2	18	4	43	3.10	
		3	4	0	105	26.25	151
	4	1	34	18	3	0.20	
		2	18	4	55	3.93	
		3	4	0	120	30.00	178
	5	1	34	18	3	0.20	
		2	18	4	62	4.43	
		3	4	0	130	32.50	195
	6	1	34	18	3	0.20	
		2	18	4	85	6.07	
		3	4	0	130	32.50	218
	7	1	34	18	3	0.20	
		2	18	4	90	6.43	
		3	4	0	130	32.50	223
	8	1	34	18	3	0.20	
		2	8	4	100	7.15	
		3	4	0	130	32.50	233
	Over 8	1	34	18	3	0.20	
		2	18	4	115	8.23	
		3	4	0	130	32.50	248

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
36	1/2	1	36	20	3	0.20	
		2	20	4	16	1.00	
		3	4	0	5	1.25	24
	1	1	36	20	3	0.20	
		2	20	4	16	1.00	
		3	4	0	25	6.25	44
	1 1/2	1	36	20	3	0.20	
		2	20	4	30	1.88	
		3	4	0	30	7.50	63
	2	1	36	20	3	0.20	
		2	20	4	40	2.50	
		3	4	0	70	17.50	113
	3	1	36	20	3	0.20	
		2	20	4	52	3.25	
		3	4	0	115	28.75	170
	4	1	36	20	3	0.20	
		2	20	4	65	4.06	
		3	4	0	130	32.50	198
	5	1	36	20	3	0.20	
		2	20	4	90	5.63	
		3	4	0	130	32.50	223
	6	1	36	20	3	0.20	
		2	20	4	100	6.25	
		3	4	0	130	32.50	233
	7	1	36	20	3	0.20	
		2	20	4	110	6.88	
		3	4	0	130	32.50	243
	8	1	36	20	3	0.20	
		2	20	4	120	7.50	
		3	4	0	130	3.50	253
	Over 8	1	36	20	3	0.20	
		2	20	4	140	8.75	
		3	4	0	130	32.50	273

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure	Decompression data						
	Working period	Stage no.	Pressure reduction psig		Time in stage	Pressure reduction rate	Total time decompress
psig	Hours		From	To	Minutes	Min/Pound	Minutes
38	1/2	1	38	22	3	0.20	
		2	22	6	16	1.00	
		3	6	0	9	1.50	28
	1	1	38	22	3	0.20	
		2	22	6	16	1.00	
		3	6	0	30	5.00	49
	1 1/2	1	38	22	3	0.20	
		2	22	6	20	1.25	
		3	6	0	50	8.34	73
	2	1	38	22	3	0.20	
		2	22	6	30	1.88	
		3	6	0	95	15.83	128
	3	1	38	22	3	0.20	
		2	22	6	35	2.19	
		3	6	0	140	23.35	178
	4	1	38	22	3	0.20	
		2	22	6	50	3.12	
		3	6	0	150	25.00	203
	5	1	38	22	3	0.20	
		2	22	6	55	3.44	
		3	6	0	165	27.50	223
	6	1	38	22	3	0.20	
		2	22	6	70	4.38	
		3	6	0	165	27.50	238
	7	1	38	22	3	0.20	
		2	22	6	85	5.32	
		3	6	0	165	27.50	253
	8	1	38	22	3	0.20	
		2	22	6	95	5.93	
		3	6	0	165	27.50	263
	Over 8	1	38	22	3	0.20	
		2	22	6	110	6.88	
		3	6	0	165	27.50	278

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	**Decompression data**						
	Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
40	1/2	1	40	24	3	0.20	
		2	24	8	16	1.00	
		3	8	4	4	1.00	
		4	4	0	8	2.00	31
	1	1	40	24	3	0.20	
		2	24	8	16	1.00	
		3	8	4	5	1.25	
		4	4	0	25	6.25	49
	1 1/2	1	40	24	3	0.20	
		2	24	8	16	1.00	
		3	8	4	20	5.00	
		4	4	0	45	11.25	84
	2	1	40	24	3	0.20	
		2	24	8	25	1.56	
		3	8	4	20	5.00	
		4	4	0	95	23.75	143
	3	1	40	24	3	0.20	
		2	24	8	30	1.88	
		3	8	4	30	7.50	
		4	4	0	120	30.00	183
	4	1	40	24	3	0.20	
		2	24	8	45	2.81	
		3	8	4	35	8.75	
		4	4	0	130	32.50	213
	5	1	40	24	3	0.20	
		2	24	8	4	2.94	
		3	8	4	3	13.25	
		4	4	0	30	32.50	233
	6	1	40	24	3	0.20	
		2	24	8	55	3.44	
		3	8	4	60	15.00	
		4	4	0	130	32.50	248

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

	Decompression data						
Working chamber pressure psig	Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	7	1	40	24	3	0.20	
		2	24	8	65	4.06	
		3	8	4	60	15.00	
		4	4	0	130	32.50	258
Transferred from CASO, Article 12. New to GISO	8	1	40	24	3	0.20	
		2	24	8	75	4.70	
		3	8	4	60	15.00	
		4	4	0	130	32.50	268
	Over 8	1	40	24	3	0.20	
		2	24	8	95	5.93	
		3	8	4	60	15.00	
		4	4	0	130	32.50	288
42	1/2	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	6	1.00	
		4	4	0	12	3.00	37
	1	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	12	2.00	
		4	4	0	25	6.25	56
	1 1/2	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	23	3.83	
		4	4	0	60	15.00	102
	2	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	30	5.00	
		4	4	0	95	23.75	144
	3	1	42	26	3	0.20	
		2	26	10	16	1.00	
		3	10	4	50	8.34	
		4	4	0	120	30.00	189

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	4	1	42	26	3	0.20	
		2	26	10	17	1.06	
		3	10	4	65	10.83	
		4	4	0	130	32.50	215
	5	1	42	26	3	0.20	
		2	26	10	27	1.69	
		3	10	4	85	14.18	
		4	4	0	130	32.50	245
	6	1	42	26	3	0.20	
		2	28	10	27	1.69	
		3	10	4	100	16.67	
		4	4	0	130	32.50	260
	7	1	42	26	3	0.20	
		2	26	10	30	1.88	
		3	10	4	100	16.67	
		4	4	0	130	32.50	263
	8	1	42	26	3	0.20	
		2	6	10	35	2.19	
		3	10	4	100	16.67	
		4	4	0	130	32.50	268
	Over 8	1	42	26	3	0.20	
		2	26	10	60	3.75	
		3	10	4	100	16.67	
		4	4	0	130	32.50	293
44	1/2	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	8	1.00	
		4	4	0	16	4.00	43
	1	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	20	2.50	
		4	4	0	25	6.25	64

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data						
	Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	1 1/2	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	27	3.38	
		4	4	0	72	18.00	118
	2	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	40	5.00	
		4	4	0	95	23.75	154
	3	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	60	7.50	
		4	4	0	120	30.00	199
	4	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	85	10.62	
		4	4	0	130	32.50	234
	5	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	105	13.13	
		4	4	0	130	32.50	254
	6	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	115	14.38	
		4	4	0	130	32.50	264
	7	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	120	15.00	
		4	4	0	130	32.50	269
	8	1	44	28	3	0.20	
		2	28	12	16	1.00	
		3	12	4	120	15.00	
		4	4	0	130	32.50	269
	Over 8	1	44	28	3	0.20	
		2	28	12	40	2.50	
		3	12	4	120	15.00	
		4	4	0	130	32.50	293

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

	Decompression data						
Working chamber pressure psig	Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
46	1/2	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	10	1.00	
		4	4	0	15	3.75	44
	1	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	25	2.50	
		4	4	0	30	7.50	74
	1 1/2	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	35	3.50	
		4	4	0	85	21.20	139
	2	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	47	4.70	
		4	4	0	105	26.25	171
	3	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	65	6.50	
		4	4	0	130	32.50	214
	4	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	95	9.50	
		4	4	0	130	32.50	244
	5	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	120	12.00	
		4	4	0	130	32.50	269
	6	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	125	12.50	
		4	4	0	130	32.50	274

Transferred from CASO, Article 12. New to GISO

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	7	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	140	14.00	
		4	4	0	130	32.50	289
Transferred from CASO, Article 12. New to GISO	8	1	46	30	3	0.20	
		2	30	14	16	1.00	
		3	14	4	150	15.00	
		4	4	0	130	32.50	299
	Over 8	1	46	30	3	0.20	
		2	30	14	25	1.56	
		3	14	4	160	16.00	
		4	4	0	130	32.50	318
48	1/2	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	12	1.00	
		4	4	0	20	5.00	51
	1	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	35	2.92	
		4	4	0	35	8.75	89
	1 1/2	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	45	3.75	
		4	4	0	80	20.00	144
	2	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	60	5.00	
		4	4	0	110	27.50	189
	3	1	48	32	3	0.20	
		2	32	16	6	1.00	
		3	16	4	90	7.50	
		4	4	0	120	30.00	229

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	Decompression data: Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	4	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	120	10.00	
		4	4	0	130	32.50	269
Transferred from CASO, Article 12. New to GISO	5	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	140	11.67	
		4	4	0	130	32.50	299
	6	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	160	13.33	
		4	4	0	130	32.50	309
	7	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	170	14.17	
		4	4	0	130	32.50	319
	8	1	48	32	3	0.20	
		2	32	16	16	1.00	
		3	16	4	170	14.17	
		4	4	0	130	32.50	319
50	1/2	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	14	1.00	
		4	4	0	25	6.25	58
	1	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	40	2.86	
		4	4	0	35	8.75	94
	1 1/2	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	55	3.93	
		4	4	0	90	22.50	164

Do not interpolate, use next higher value for conditions not computed.

DECOMPRESSION TABLE NO. 2 (Continued)

Working chamber pressure psig	**Decompression data**						
	Working period Hours	Stage no.	Pressure reduction psig From	To	Time in stage Minutes	Pressure reduction rate Min/Pound	Total time decompress Minutes
	2	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	70	5.00	
		4	4	0	120	30.00	209
Transferred from CASO, Article 12. New to GISO	3	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	100	7.15	
		4	4	0	130	32.50	249
	4	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	130	8.58	
		4	4	0	130	32.50	279
	5	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	160	11.42	
		4	4	0	130	32.50	309
	6	1	50	34	3	0.20	
		2	34	18	16	1.00	
		3	18	4	180	12.85	
		4	4	0	130	32.50	329

Do not interpolate, use next higher value for conditions not computed.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

NOTE:

- Appendix B is proposed for transfer from Subchapter 3, CASO, in its entirety.
- The gray highlighting indicates proposed non-substantive change(s) to original language.
- Tables No. 3, 4 and 5 are proposed for reformatting to improve clarity pursuant to the Title 8 Reform Project.

Appendix B

The information contained in the following pages is adapted from the U.S. Navy Diving Tables and is to be used when an employee will enter a compressed air environment more than once within a 12-hour period.

The Division may accept alternate methods of decompression for repetitive exposures provided the licensed physician submits ~~his~~ proposed procedures to the Division for its review and approval.

The Department of the Navy is in no way liable for the use or misuse of Tables 3, 4, and 5.

NOTE: Table No. 3 of Appendix B is proposed for transfer from Subchapter 3, CASO, Appendix B, Table No. 3. Table No. 3 is proposed for reformatting to improve clarity pursuant to the Title 8 Reform Project.

TABLE 3

Transfer-red from CASO, Article 12. New to GISO

Pressure (psig)	Repetitive Groups															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Z
4	60	120	210	300												
7	35	70	110	160	225	350										
9	25	50	75	100	135	180	240	325								
11	20	35	55	75	100	125	160	195	245	315						
13	15	30	45	60	75	95	120	145	170	205	250	310				
16	5	15	25	40	50	60	80	100	120	140	160	190	220	270	310	
18	5	15	25	30	40	50	70	80	100	110	130	150	170	230	270	300
22	---	10	15	25	30	40	50	60	70	80	90	110	140	160	200	240
27	---	10	15	20	25	30	40	50	55	60	70	80	100	120	140	200
31	---	5	10	15	20	30	35	40	45	50	60	70	80	100	130	170
36	---	5	10	15	20	25	30	35	40	---	50	60	70	90	110	150
40	---	5	10	12	15	20	25	30	--	40	---	50	60	80	90	130
45	---	5	7	10	15	20	22	25	30	---	40	50	---	60	80	120
49	---	---	5	10	13	15	20	25	---	30	---	40	50	60	70	100

TABLE 3

INSTRUCTIONS FOR USE OF TABLE 3

The tabulated compressed air exposure times are in minutes. The times at the various pressures in each vertical column are the maximum exposures during which a compressed air worker will remain within the group listed at the head of the column.

To find the repetitive group designation enter the table on the exact or next greater working pressure than that to which exposed and select the listed exposure time exact or next greater than the actual exposure time. The repetitive group designation is indicated by the letter at the head of the vertical column where the selected exposure time is listed.

For example: An exposure in compressed air was for 45 minutes at 26 psig. To determine the repetitive group enter the table at 27 psig (the next higher pressure, as 26 psig is not listed) and move horizontally until 50 minutes (the next greater tabulated exposure time, as 45 minutes is not listed), then move vertically to the top of the column where "H" is shown as the repetitive group.

NOTE: Table No. 4 of Appendix B is proposed for transfer from Subchapter 3, CASO, Appendix B, Table No. 4. Table No. 4 is proposed for reformatting to improve clarity pursuant to the Title 8 Reform Project.

Transferred from CASO, Article 12. New to GISO

TABLE 4

	REPETITIVE GROUP AT END OF OPEN AIR INTERVAL (Hours: Minutes)															
	Z	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A
Z	0:10 0:22	0:34	0:48	1:02	1:18	1:25	1:55	2:17	2:45	3:10	3:45	4:29	5:27	6:65	10:05	12:00*
O		0:10 0:23	0:36	0:51	1:07	1:24	1:43	2:04	2:29	2:59	3:33	4:17	5:16	6:44	9:54	12:00*
N			0:10 0:24	0:39	0:54	1:11	1:30	1:53	2:18	2:47	3:22	4:04	5:03	6:32	9:43	12:00*
M				0:10 0:25	0:42	0:59	1:18	1:39	2:05	2:34	3:08	3:52	4:49	6:18	9:28	12:00*
L					0:10 0:26	0:45	1:04	1:25	1:49	2:19	2:53	3:36	4:35	6:02	9:12	12:00*
K						0:10 0:28	0:49	1:11	1:35	2:03	2:38	3:21	4:19	5:48	8:58	12:00*
J							0:10 0:31	0:54	1:19	1:47	2:20	3:04	4:02	5:40	8:40	12:00*
I								0:10 0:33	0:59	1:29	2:02	2:44	3:43	5:12	8:21	12:00*
H									0:10 0:36	1:06	1:41	2:23	3:20	4:49	7:59	12:00*
G										0:10 0:40	1:15	1:59	2:58	4:25	7:35	12:00*
F											0:10 0:45	1:29	2:28	3:57	7:05	12:00*
E												0:10 0:54	1:57	3:22	6:32	12:00*
D													0:10 1:09	2:38	5:48	12:00*
C														0:10 1:39	2:49	12:00*
B															0:10 2:10	12:00*
A																0:10 12:00*

REPETITIVE GROUP AT BEGINNING OF OPEN AIR INTERVAL (FROM TABLE 3)

INSTRUCTIONS FOR USE OF TABLE 4.

Open air interval time in the table is in hours and minutes (2:20 means 2 hours and 20 minutes). The open air interval must be at least 10 minutes. Find the repetitive group designation from Table 3 on the diagonal slope. Enter the table horizontally to select the listed open air interval time that is exactly or NEXT GREATER than the actual open air interval time. Thee repetitive group designation for the end of the open air interval is at the head of the vertical column where the selected open air interval time is listed. For example: A previous compressed air exposure was for 4.5 minutes at 30 psig. The compressed air worker decompresses according to Table 2 and remains in open air for 1 hour and 30 minutes and wishes to find the new repetitive group designation. From Table 3 the repetitive group at the start of the open air interval is "I". Now enter Table 4 at "I" on the diagonal slope and move horizontally to the column having 2:02 listed, which is the next greater time, since 1: 30 in not tabulated. A sufficient amount of Inert gas has now been lost to place the compressed air worker in group "F."

TABLE 4

* NOTE: Compressed air exposures following open air intervals of more than 12 hours are not considered multiple exposures. ACTUAL compressed air exposure time will be used for the determination of decompression time for open air intervals greater than 12 hours.

NOTE: Table No. 5 of Appendix B is proposed for transfer from Subchapter 3, CASO, Appendix B, Table No. 5. Table No. 5 is proposed for reformatting to improve clarity pursuant to the Title 8 Reform Project.

TABLE 5

Transferred from CASO, Article 12. New to GISO

Repet. Group	Repetitive Exposure Pressure (psig)							
	18	22	27	31	36	40	45	49
A	7	6	5	4	4	3	3	3
B	17	13	11	9	8	7	7	6
C	25	21	17	15	13	11	10	10
D	37	29	24	20	18	16	14	13
E	49	38	30	26	23	20	18	16
F	61	47	36	31	28	24	22	20
G	73	56	44	37	32	29	26	24
H	87	66	52	43	38	33	30	27
I	101	76	61	50	43	38	34	31
J	116	87	70	57	48	43	38	34
K	138	99	79	64	54	47	43	38
L	161	111	88	72	61	53	48	42
M	187	124	97	80	68	58	52	47
N	213	142	107	87	73	64	57	51
O	241	160	117	96	80	70	62	55
Z	257	169	122	100	84	73	64	57

TABLE 5

INSTRUCTIONS FOR USE OF TABLE 5

The compressed air exposure times listed in this table are called "residual nitrogen times" and are the times a compressed air worker is to consider already spent in compressed air when starting a repetitive exposure to a specific pressure. They are in minutes.

Enter the table horizontally with the repetitive group designation from the Open Air Interval Credit Table (table 4). The time in each vertical column is the number of minutes that would be required (at the pressure listed at the head of the column) to saturate to the particular group.

For example: The final group designation from the Open Air Interval Credit Table (table 4) on the basis of a previous exposure and open air interval is "H." It is planned to re-enter compressed air at a pressure of 42 psig. What time must be added to the actual time spent in compressed

Transfer-red from CASO, Article 12. New to GISO

air?. Enter table 5 on row H. Since 42 psig is greater than 40 psig but less than 45 psig, use the longer time of 33 minutes. This means that the compressed air worker enters the compressed air environment as though the worker had already been at 42 psig for 33 minutes.

The exposure time listed in table 5 is added to the actual time spent in compressed air. Decompression is carried out based on the sum of the actual exposure time and the time from table 5 for the pressure encountered.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.