

Commercial Diving Performance and Qualification Standard

Commercial Diving Addendum (CDA)

This Performance and Qualification Standard (PQS) workbook is an addendum to any vessel inspection qualification (Drydock, OI, FOII, FPI, etc.), which may require the oversight and observation of commercial diving operations. It is your responsibility to document all completed unit training items and keep track of all inspections completed during this process by filling out the Inspection Log contained within this PQS workbook.

This PQS workbook contains the additional tasks and steps to complete an Inspection for Certification on a certificated U.S. flagged vessel conducting commercial diving operations. Those members who will be conducting inspections on vessels conducting Commercial Diving operations are required to complete all tasks and steps in this PQS workbook.

The CDA PQS addendum may be completed concurrently with the other vessel inspection PQS or subsequent to receiving an inspection qualification. In either case a Certification Board must be satisfactorily completed prior to receiving the "Commercial Diving" notation on the respective Letter of Certification/ Designation.

Commercial Dive Addendum PQS

RATE/ RANK	SIGNATURE/ PRINT NAME	EMPLID	INITIALS	UNIT

REMARKS:

Commercial Dive Addendum PQS

RECORD OF COMPLETION		
Training Prerequisites	Date	Training Coordinator's Signature
A. Completion of a Marine Inspector competency		
B. Completion of this PQS Workbook		
C. Successful completion of final assessment under the observation of the Verifying Officer		
D. Successful completion of the final oral qualification board		
Qualification Board Members:		
E. Certification/Designation Letter submitted for approval		
F. Once Certification/Designation Letter is signed, enter competency and certification in TMT		
REMARKS:		

Commercial Dive Addendum PQS

Task Number	Task Description	Date Completed
CDA-CD01	Examine person in charge (PIC) designation	
CDA-CD02	Examine diving supervisor's designation	
CDA-LM01	Examine dive operations manual	
CDA-LM02	Examine official logbook	
CDA-LM03	Review equipment maintenance records	
CDA-LM04	Review diving supervisor's report	
CDA-DE01	Inspect air compressor system	
CDA-DE02	Inspect breathing supply hoses	
CDA-DE03	Inspect first aid and treatment equipment	
CDA-DE04	Inspect gages and timekeeping devices	
CDA-DE05	Inspect diving ladder and stage	
CDA-DE06	Inspect surface supplied helmets and masks	
CDA-DE07	Inspect diver's safety harness	
CDA-DE08	Inspect Pressure Vessel for Human Occupancy (PVHO)	
CDA-DE09	Inspect Pressure Vessel for Human Occupancy (PVHO) - Closed Bell	
CDA-DE10	Inspect Pressure Vessel for Human Occupancy (PVHO) - Decompression Chamber	
CDA-DE11	Inspect open diving bell	
CDA-DE12	Inspect pressure piping	
CDA-DE13	Inspect compressed gas cylinders	
CDA-DE14	Inspect breathing gas supply	
CDA-DE15	Verify SCUBA air supply	
CDA-DE16	Inspect diver's equipment	
CDA-DE17	Inspect diver's equipment	
CDA-DO01	Witness SCUBA diving operation	
CDA-DO02	Witness surface-supplied air diving operation	
CDA-DO03	Witness surface-supplied mixed gas diving operation	
CDA-DO04	Witness live-boating operation	

Commercial Diving (CDA)

Certificate of Inspection

Certificates and Documents (CD)

Commercial Diving

Task: CDA-CD01 Examine person in charge (PIC) designation

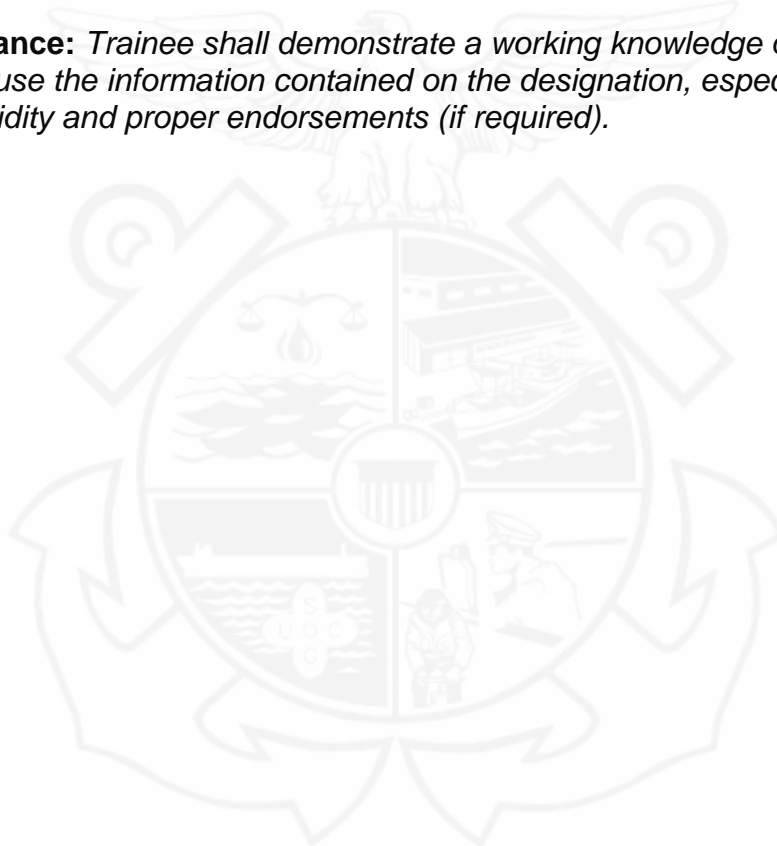
Condition: While validating certificates and documents

Standard: In compliance with applicable policies, laws, regulations and standards

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
CD01.1	Verify owner has designated a PIC	46 CFR 197.208	

Verifying Officer Guidance: Trainee shall demonstrate a working knowledge of the purpose and contents of and how to use the information contained on the designation, especially with regards to issuance, periods of validity and proper endorsements (if required).



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)

Certificate of Inspection

Certificates and Documents (CD)

Commercial Diving

Task: CDA-CD02 Examine diving supervisor's designation

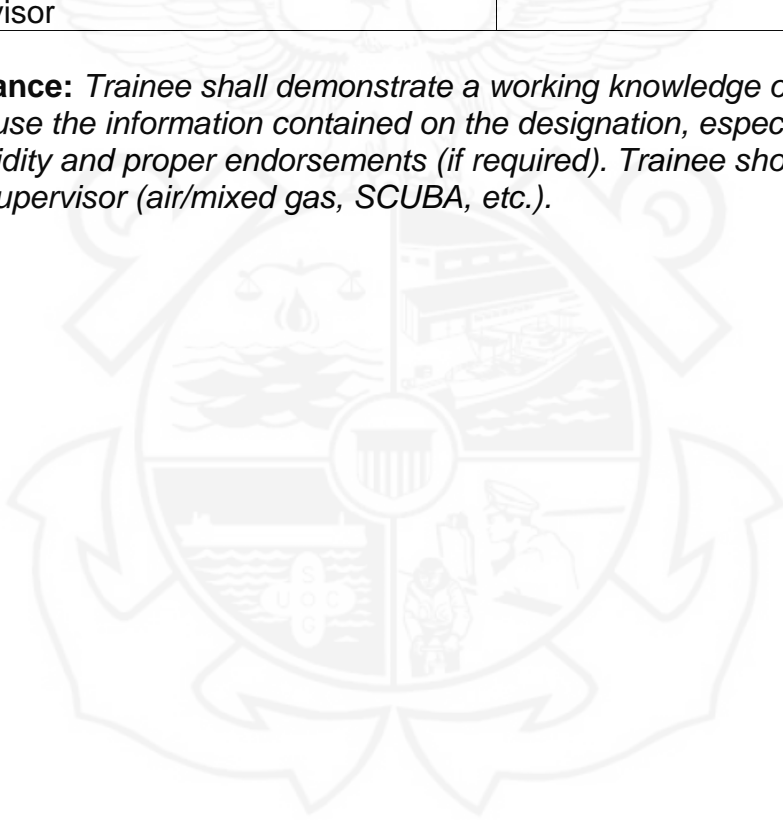
Condition: While validating certificates and documents

Standard: In compliance with applicable policies, laws, regulations and standards

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
CD02.1	Verify designation	46 CFR 197.210	
CD02.2	Verify each diving operation has a designated diving supervisor	46 CFR 197.402(a)(2)(i)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of the purpose and contents of and how to use the information contained on the designation, especially with regards to issuance, periods of validity and proper endorsements (if required). Trainee should be aware of any limitations of the Dive Supervisor (air/mixed gas, SCUBA, etc.).*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Logs and Manuals Inspection (LM)****Commercial Diving****Task:** CDA-LM01 Examine dive operations manual**Condition:** *While validating logs and manuals***Standard:** *In compliance with applicable policies, laws, regulations and standards***References:** 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
LM01.1	Verify presence	46 CFR 197.420(a)(1)	
LM01.2	Verify availability to dive team members at dive location(s)	46 CFR 197.420(a)(2)	
LM01.3	Verify contents	46 CFR 197.420(d) 46 CFR 197.420(c) 46 CFR 197.420(b)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of the manual's format, purpose and how to use the information contained therein to properly verify that the operation is complying with/using it. Trainee shall pay particular attention to the requirements for Emergency Procedures with regard to Fire and Abandon Ship evolutions. The safety of the divers while in decompression or saturation must be specifically addressed in a way that satisfies and addresses the safety and health of the dive team members.*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)

Certificate of Inspection

Logs and Manuals Inspection (LM)

Commercial Diving

Task: CDA-LM02 Examine official logbook

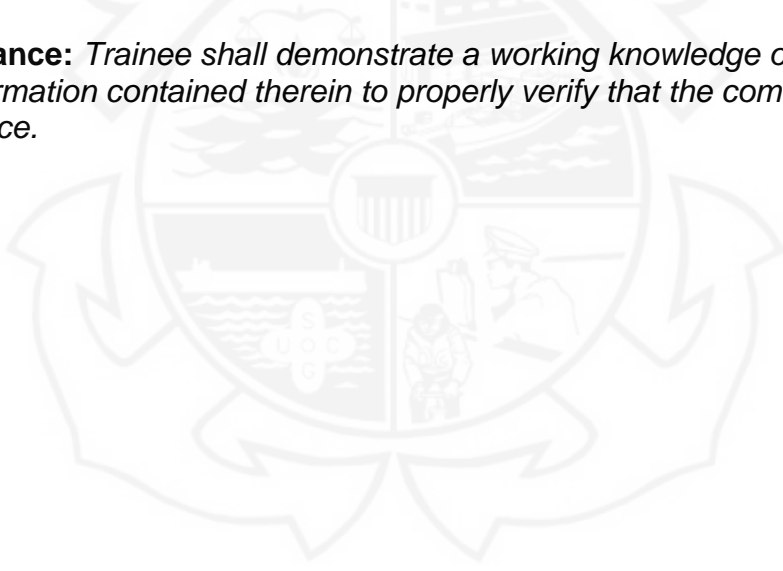
Condition: While validating logs and manuals

Standard: In compliance with applicable policies, laws, regulations and standards

- References:**
1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
 2. Title 46, United States Code § 11301 Official Logbooks
 3. Title 46, United States Code § 11302 Official Logbooks - Manner of Making Entries

Steps		References	Initials
LM02.1	Verify presence	46 CFR 197.480 46 USC 11301 46 CFR 11302	
LM02.2	Verify contents	46 CFR 197.482(a) 46 CFR 197.482(b)	
LM02.3	Verify regulatory deviations logged	46 CFR 197.482(c)	

Verifying Officer Guidance: Trainee shall demonstrate a working knowledge of log's format, purpose and how to use the information contained therein to properly verify that the commercial diving operation is in compliance.



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Logs and Manuals Inspection (LM)****Commercial Diving****Task:** CDA-LM03 Review equipment maintenance record**Condition:** *While validating logs and manuals***Standard:** *In compliance with applicable policies, laws, regulations and standards***References:** 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
LM03.1	Verify medical kit inspection	46 CFR 197.482(d)(1) 46 CFR 197.454	
LM03.2	Verify air compressor tests	46 CFR 197.482(d)(2) 46 CFR 197.450(a)	
LM03.3	Verify oxygen service information	46 CFR 197.482(d)(5) 46 CFR 197.452	
LM03.4	Verify tests of breathing supply hoses	46 CFR 197.482(d)(6) 46 CFR 197.456	
LM03.5	Verify results of breathing gas supply system(s) inspection(s)	46 CFR 197.482(d)(7) 46 CFR 197.450(b), (c) & (d)	
LM03.6	Verify breathing mixture checks	46 CFR 197.482(d)(3)	
LM03.7	Verify tests of depth gauges and timekeeping devices	46 CFR 197.482(d)(8) 46 CFR 197.458	
LM03.8	Verify tests and inspection of each Pressure Vessel for Human Occupancy (PVHO)	46 CFR 197.482(d)(9) 46 CFR 197.462	
LM03.9	Verify tests and inspections of diving equipment	46 CFR 197.482(d)(10) 46 CFR 197.346 46 CFR 197.460	
LM03.10	Verify test of pressure piping	46 CFR 197.482(d)(11) 46 CFR 197.462	
LM03.11	Verify tests and inspections of volume tanks and cylinders	46 CFR 197.482(d)(12) 46 CFR 197.462	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of log's format, purpose and how to use the information contained therein to properly verify that the operation is completing the log entries as required.*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)

Certificate of Inspection

Logs and Manuals Inspection (LM)

Commercial Diving

Task: CDA-LM04 Review diving supervisor's report

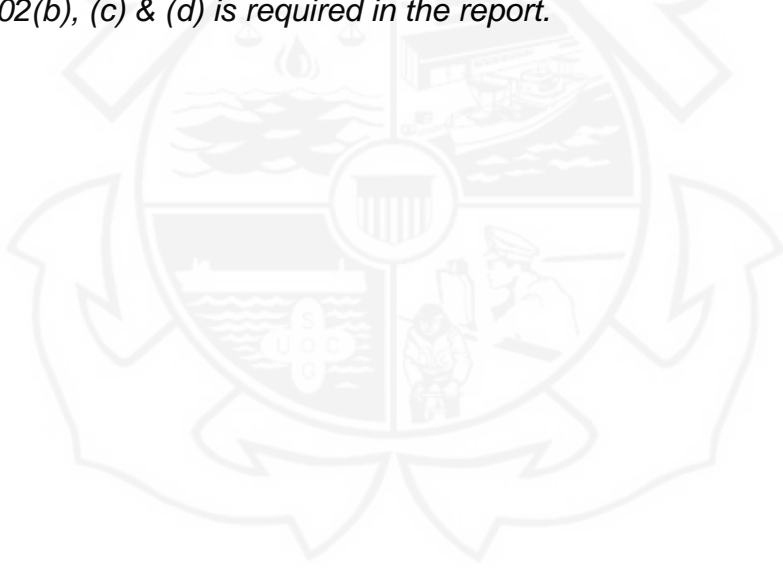
Condition: While validating logs and manuals

Standard: In compliance with applicable policies, laws, regulations and standards

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
LM04.1	Verify presence	46 CFR 197.404(a)(4) 46 CFR 197.402(a)(2)(ii)	
LM04.2	Verify contents	46 CFR 197.402(a)(2)(ii) 46 CFR 197.402(b), (c), (d) & (e)	

Verifying Officer Guidance: Trainee shall demonstrate a working knowledge of report's format, purpose and how to use the information contained therein to properly verify that the operation is in compliance. LM05.2: The nature of the diving operation will determine whether the information required in 46 FR 197.402(b), (c) & (d) is required in the report.



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment****Commercial Diving****Task:** CDA-DE01 Inspect air compressor system**Condition:** *During dive equipment inspection***Standard:** *In compliance with applicable policies, laws, regulations and standards*

- References:**
1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
 2. Title 46, Code of Federal Regulations Part 54 Pressure Vessels
 3. Title 46, Code of Federal Regulations Part 56 Piping Systems & Appurtenances
 4. Title 46, Code of Federal Regulations Part 58 Main & Auxiliary Machinery & Related Systems
 5. Title 46, Code of Federal Regulations Part 61 Marine Engineering - Periodic Tests & Inspections

Steps		References	Initials
DE01.1	Verify volume tank is stamped	46 CFR 197.310(a)(1)	
DE01.2	Verify check valve on inlet side	46 CFR 197.310(a)(1)(i)	
DE01.3	Verify operation of pressure gage	46 CFR 197.310(a)(1)(ii) 46 CFR 54.15-5(f)	
DE01.4	Verify operation of relief valve	46 CFR 197.310(a)(1)(iii) 46 CFR 61.10-5(i) 46 CFR 54.15-5, 15-10(a) & (g)	
DE01.5	Verify operation of drain valve	46 CFR 197.310(a)(1)(iv)	
DE01.6	Verify location of intakes	46 CFR 197.310(b)	
DE01.7	Witness operation of efficient filtration system	46 CFR 197.310(c)	
DE01.8	Witness proper operation of slow-opening shut-off valve	46 CFR 197.310(d) 46 CFR 56.20	
DE01.9	Verify installation of machinery covers and guards	46 CFR 58.01-20	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving - Surface Supplied

Task: CDA-DE02 Inspect breathing supply hoses

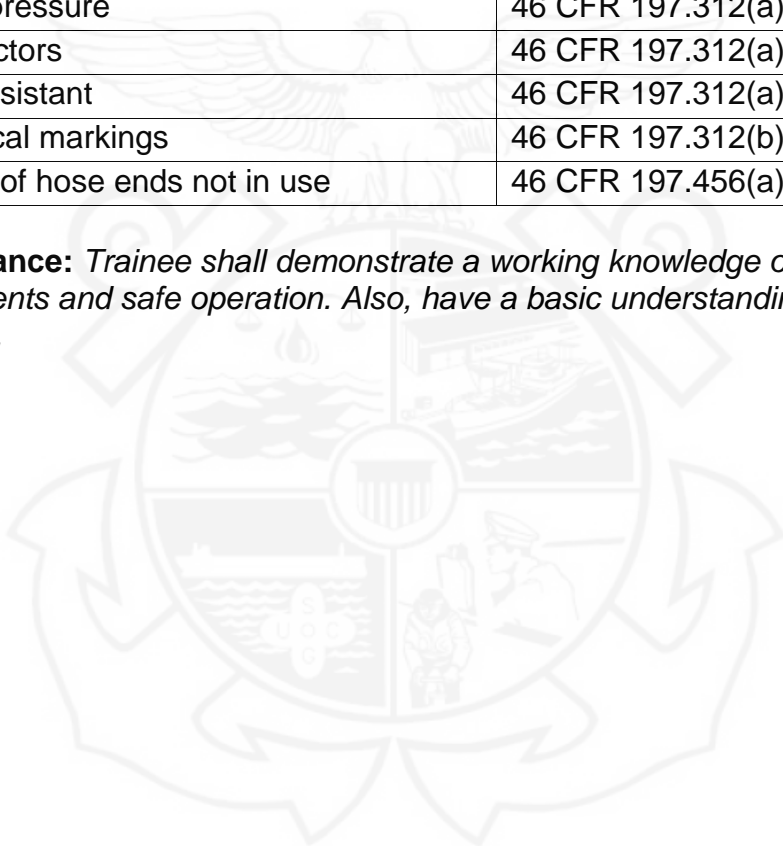
Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE02.1	Verify maximum working pressure	46 CFR 197.312(a)(1)	
DE02.2	Verify burst pressure	46 CFR 197.312(a)(2)	
DE02.3	Verify connectors	46 CFR 197.312(a)(3)	
DE02.4	Verify kink resistant	46 CFR 197.312(a)(4)	
DE02.5	Verify umbilical markings	46 CFR 197.312(b)	
DE02.6	Verify status of hose ends not in use	46 CFR 197.456(a)(4)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment****Commercial Diving****Task:** CDA-DE03 Inspect first aid and treatment equipment**Condition:** *During dive equipment inspection***Standard:** *In compliance with applicable policies, laws, regulations and standards***References:** 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE03.1	Verify medical kit is approved	46 CFR 197.314(a)(1)	
DE03.2	Verify medical kit contents	46 CFR 197.314(a)(1) 46 CFR 197.314(a)(2) 46 CFR 197.314(a)(3)	
DE03.3	Verify capability to remove an injured diver from water	46 CFR 197.314(a)(4)	
DE03.4	Verify two-way communications system	46 CFR 197.314(b)	
DE03.5	Verify decompression chamber	46 CFR 197.314(c)(1)	
DE03.6	Verify decompression and treatment table	46 CFR 197.314(c)(2)	
DE03.7	Verify adequate supply of breathing gases	46 CFR 197.314(c)(3)	
DE03.8	Verify medical kit suitable for decompression chamber	46 CFR 197.314(c)(4)	
DE03.9	Verify capability to assist an injured diver into decompression chamber	46 CFR 197.314(c)(5)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and proper use. Also, have a basic understanding of first aid principles and concepts.*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving

Task: CDA-DE04 Inspect gages and timekeeping devices

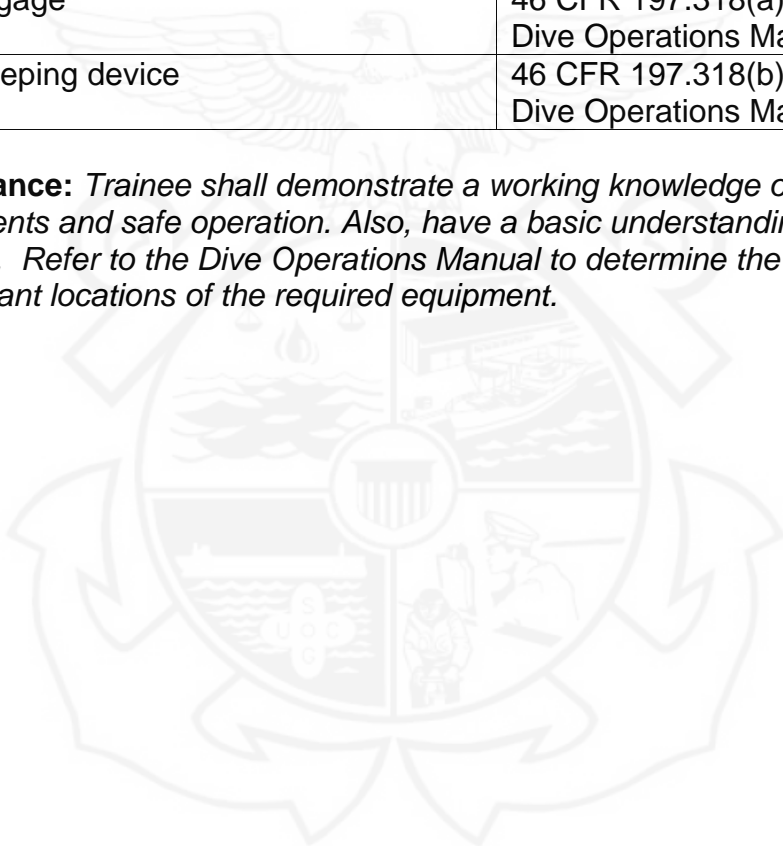
Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

- References:**
1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
 2. Dive Operations Manual

Steps		References	Initials
DE04.1	Verify depth gage	46 CFR 197.318(a) Dive Operations Manual	
DE04.2	Verify timekeeping device	46 CFR 197.318(b) Dive Operations Manual	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts. Refer to the Dive Operations Manual to determine the nature of the diving operation and the resultant locations of the required equipment.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving

Task: CDA-DE05 Inspect diving ladder and stage

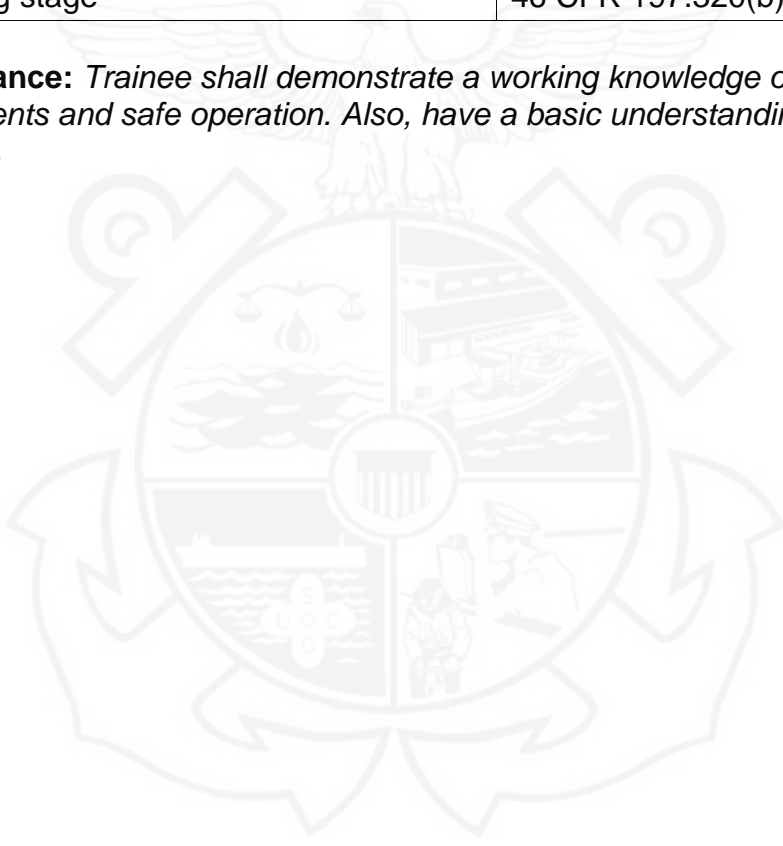
Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE05.1	Inspect diving ladder	46 CFR 197.320(a)	
DE05.2	Inspect diving stage	46 CFR 197.320(b)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment****Commercial Diving - Surface Supplied****Task:** CDA-DE06 Inspect surface supplied helmets and masks**Condition:** *During dive equipment inspection***Standard:** *In compliance with applicable policies, laws, regulations and standards***References:** 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE06.1	Verify operation of non-return valve	46 CFR 197.322(a)(1)	
DE06.2	Verify operation of exhaust valve	46 CFR 197.322(a)(2)	
DE06.3	Verify operation of two-way communications	46 CFR 197.322(a)(3)	
DE06.4	Verify mask's or helmet's ventilator	46 CFR 197.322(b)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of manufacturers maintenance requirements and engineering principles and concepts. Step 6.4 can be accomplished by: (1) note the serial numbers of all helmets/masks; (2) locate these numbers in the required equipment maintenance logbook; (3) confirm that the required maintenance has been completed. The Dive Supervisor/PIC should be able to provide documentation and/or procedures on how each helmet/mask is maintained & tested to ensure they meet the performance requirements fo 46 CFR 197.322(b).*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving - Surface Supplied

Task: CDA-DE07 Inspect diver's safety harness

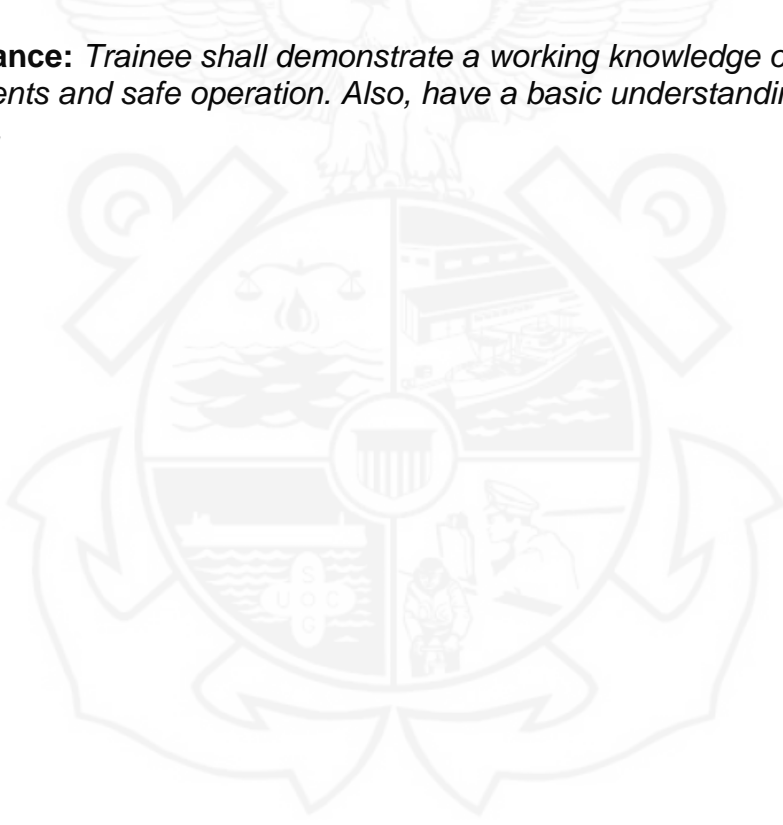
Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE07.1	Verify positive buckling device	46 CFR 197.324(a)	
DE07.2	Verify attachment point for umbilical life line	46 CFR 197.324(b)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment****Commercial Diving - Surface Supplied****Task:** CDA-DE08 Inspect Pressure Vessel for Human Occupancy (PVHO)**Condition:** *During dive equipment inspection***Standard:** *In compliance with applicable policies, laws, regulations and standards*

- References:**
1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
 2. ASME Safety Standard for Pressure Vessels for Human Occupancy (PVHO-1)
 3. COMDTINST M16000.7B Marine Safety Manual Volume II Material Inspection Ch-1

Steps		References	Initials
DE08.1	Verify approval and stamp	46 CFR 197.328(a) ASME PVHO-1 MSM II/C.1.E.3.a - .f	
DE08.2	Verify location of valves	46 CFR 197.328(d)(1) 46 CFR 197.328(d)(2)	
DE08.3	Verify operation of pressure relief device	46 CFR 197.328(d)(3) ASME PVHO-1/1.8	
DE08.4	Verify operation of built-in breathing system	46 CFR 197.328(d)(4)	
DE08.5	Verify operation of two-way communications	46 CFR 197.328(d)(5) 46 CFR 197.328(d)(6)	
DE08.6	Verify operation of pressure gage(s)	46 CFR 197.328(d)(7)	
DE08.7	Verify viewports	46 CFR 197.328(d)(8) 46 CFR 197.328(d)(9)	
DE08.8	Verify sufficient illumination	46 CFR 197.328(d)(10)	
DE08.9	Verify sources of combustible materials & ignition are minimalized	46 CFR 197.328(d)(11)	
DE08.10	Verify protective device on inlet side of exhaust lines	46 CFR 197.328(d)(12)	
DE08.11	Verify fire extinguishing capability	46 CFR 197.328(d)(13)	
DE08.12	Verify means of maintaining oxygen content	46 CFR 197.328(d)(14)	

[Task CDA-DE08 continued on next page]

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Steps		References	Initials
DE08.13	Verify means of maintaining carbon dioxide content	46 CFR 197.328(d)(15)	
DE08.14	Verify operation of breathing and pressure supply control overrides	46 CFR 197.328(d)(16)	
DE08.15	Verify operation of speech unscrambler	46 CFR 197.328(d)(17)	
DE08.16	Examine all modifications or alterations & confirm required tests conducted/logged	46 CFR 197.328(d)(19) ASME-PVHO-1	

Verifying Officer Guidance: *Trainee shall demonstrate ability to apply references found in 46 CFR Part 54. Trainee shall demonstrate ability to apply references found in ASME-Pressure Vessel Code and PVHO-1 to include fabrication, inspection, testing and repairs or alterations to ASME stamped PVHOs. For step 8.10 it is important for the trainee to know that based on the recommendations in NFPA 10 & 99A, all portable fire extinguishers for hyperbaric use shall ONLY be of the "water type" extinguishing agent! This is to eliminate extremely dangerous and life-threatening situations that will arise if other gaseous propellants are introduced during diver compression or decompression.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment****Commercial Diving - Surface Supplied**

Task: CDA-DE09 Inspect Pressure Vessel for Human Occupancy (PVHO) - Closed Bell

Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE09.1	Verify meets all PVHO requirements	46 CFR 197.330(a) 46 CFR 197.328	
DE09.2	Verify underwater breathing apparatus(s)	46 CFR 197.330(a)(1)	
DE09.3	Verify umbilical	46 CFR 197.330(a)(2)	
DE09.4	Verify lifting equipment attached	46 CFR 197.330(a)(3)	
DE09.5	Verify operation of emergency locating device	46 CFR 197.330(a)(6)	
DE09.6	Verify capability to remove an injured diver	46 CFR 197.330(a)(7)	
DE09.7	Verify life support capabilities	46 CFR 197.330(a)(8)	
DE09.8	Verify capability of attachment to another PVHO	46 CFR 197.330(b)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*

Inspector's Name: (Last, First, Initial)

EMPLID:

Verifying Officer's Signature:

Date:

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment****Commercial Diving - Surface Supplied**

Task: CDA-DE10 Inspect Pressure Vessel for Human Occupancy (PVHO) - Decompression Chamber

Condition: During dive equipment inspection

Standard: In compliance with applicable policies, laws, regulations and standards

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE10.1	Verify meets all PVHO requirements	46 CFR 197.332(a) 46 CFR 197.328	
DE10.2	Verify internal dimensions and capability	46 CFR 197.332(b) 46 CFR 197.332(c)	
DE10.3	Verify operation of man-way locking devices	46 CFR 197.332(d)	
DE10.4	Verify internal lighting	46 CFR 197.332(e)	
DE10.5	Verify number of bunks	46 CFR 197.332(f)	
DE10.6	Verify visibility of bunks from exterior	46 CFR 197.332(g)	
DE10.7	Verify minimum pressure capabilities	46 CFR 197.332(h)	
DE10.8	Verify minimum pressurization rate	46 CFR 197.332(i)	
DE10.9	Verify minimum decompression rate	46 CFR 197.332(j)	
DE10.10	Verify operation of external pressure gage(s)	46 CFR 197.332(k)	
DE10.11	Verify operation of sound-powered headset or telephone	46 CFR 197.332(m)	

Verifying Officer Guidance: Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.

Inspector's Name: (Last, First, Initial)

EMPLID:

Verifying Officer's Signature:

Date:

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving - Surface Supplied

Task: CDA-DE11 Inspect open diving bell

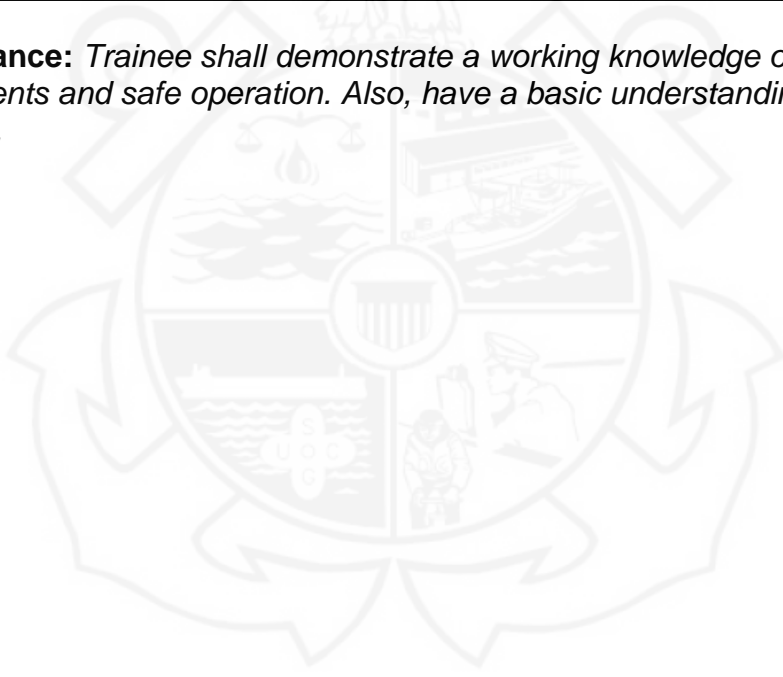
Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE11.1	Verify upper section's envelope is properly sized	46 CFR 197.334(a)	
DE11.2	Verify lifting equipment	46 CFR 197.334(b)	
DE11.3	Verify umbilical	46 CFR 197.334(c)	
DE11.4	Verify corrosion-resistant or maintained against injurious corrosion	46 CFR 197.334(d)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving

Task: CDA-DE12 Inspect pressure piping

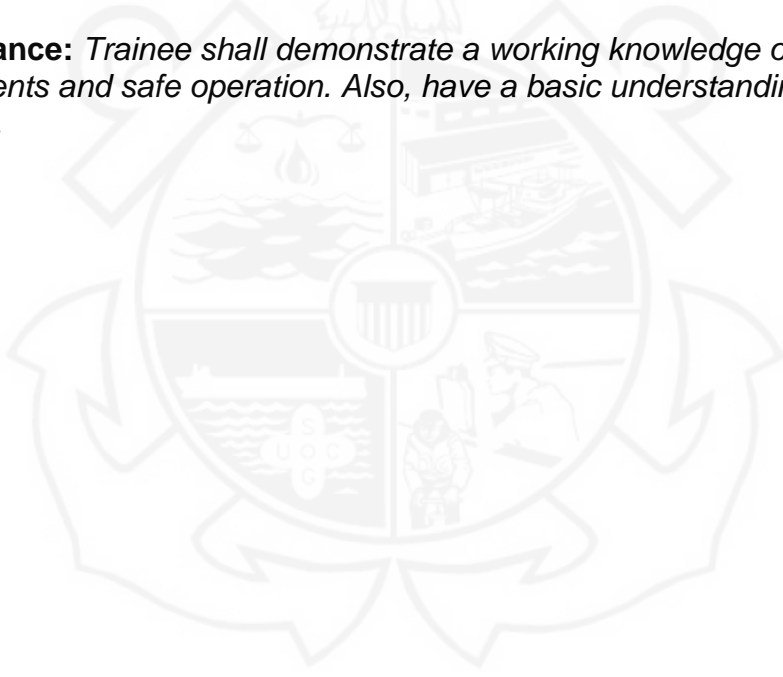
Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

- References:**
1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
 2. ANSI Code for Pressure Piping, Power Piping (B31.1)

Steps		References	Initials
DE12.1	Verify piping system meets ANSI standard	46 CFR 197.336(a) ANSI B31.1	
DE12.2	Verify markings	46 CFR 197.336(b)	
DE12.3	Verify tests after repairs, modifications or alterations	46 CFR 197.336(c) 46 CFR 197.462(a)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving

Task: CDA-DE13 Inspect compressed gas cylinders

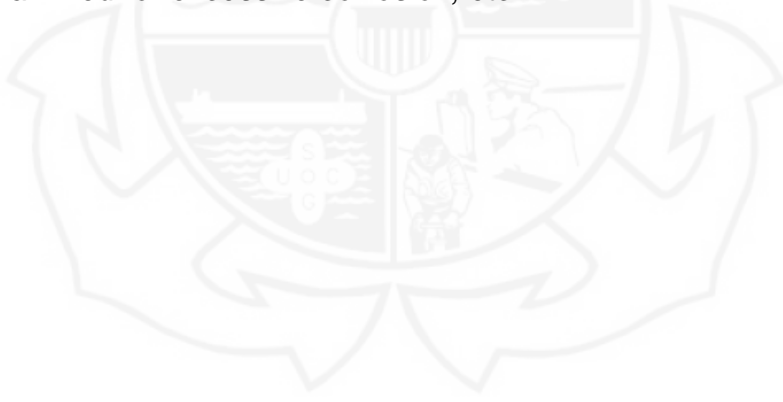
Condition: *During dive equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

- References:**
1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
 2. COMDTINST M16000.7B Marine Safety Manual Volume II Material Inspection Ch-1

Steps		References	Initials
DE13.1	Verify cylinders	46 CFR 197.338(e) MSM II/C.1.E.3.g	
DE13.2	Verify storage, protection and safeguarding	46 CFR 197.338(a) 46 CFR 197.338(b) 46 CFR 197.338(c)	
DE13.3	Verify tests after repairs, modifications or alterations	46 CFR 197.338(d)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts. Trainee should, at a minimum, verify that cylinders have been serviced, hydrostatically tested, examined for excessive corrosion, etc.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment

Commercial Diving - Surface Supplied

Task: CDA-DE14 Inspect breathing gas supply

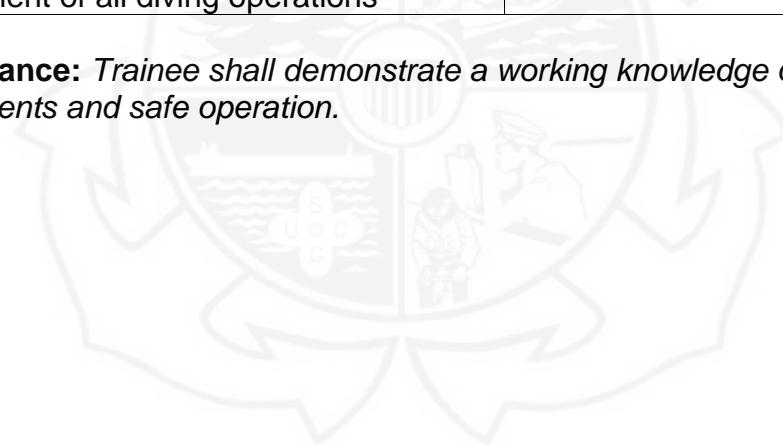
Condition: During diving equipment inspection

Standard: In compliance with applicable policies, laws, regulations and standards

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE14.1	Verify primary breathing gas supply	46 CFR 197.340(a) 46 CFR 197.314(c)(3)	
DE14.2	Verify secondary breathing gas supply	46 CFR 197.340(b)	
DE14.3	Verify diver-carried reserve breathing gas supply	46 CFR 197.340(c)	
DE14.4	Verify oxygen properties of breathing mixtures	46 CFR 197.340(f)	
DE14.5	Verify nitrogen properties of breathing mixtures	46 CFR 197.340(g)	
DE14.6	Verify helium properties of breathing mixtures	46 CFR 197.340(h)	
DE14.7	Verify compressed air properties for breathing mixtures	46 CFR 197.340(i)	
DE14.8	Verify breathing gas is checked prior to commencement of all diving operations	46 CFR 197.340(c)	

Verifying Officer Guidance: Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation.



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)

Certificate of Inspection

Diving Equipment (DE)

Commercial Diving - SCUBA

Task: CDA-DE15 Verify SCUBA air supply

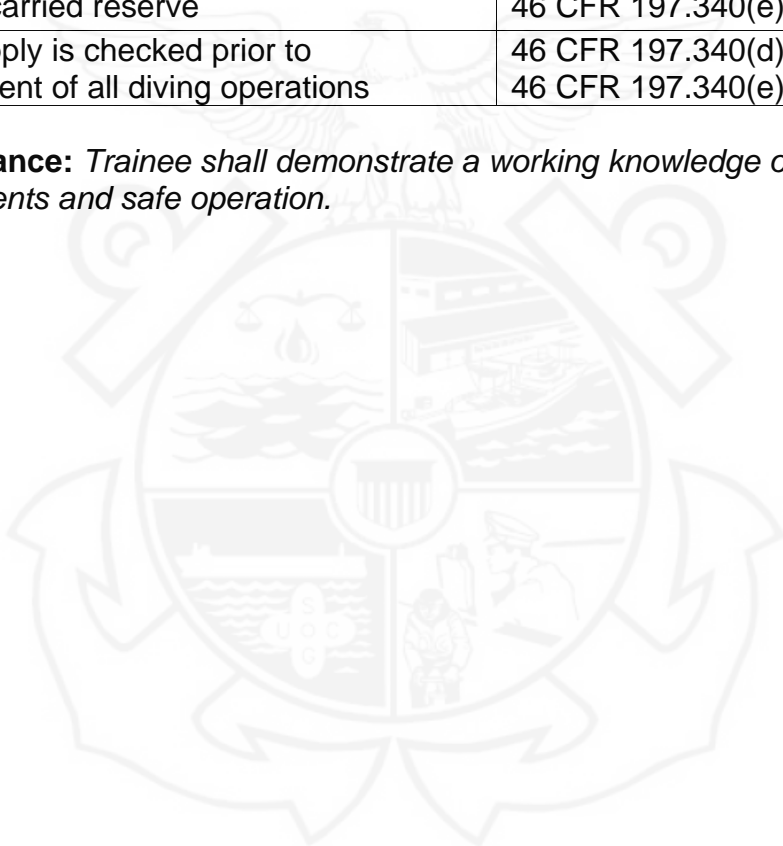
Condition: *During diving equipment inspection*

Standard: *In compliance with applicable policies, laws, regulations and standards*

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE15.1	Verify primary air supply	46 CFR 197.340(d)	
DE15.2	Verify diver-carried reserve	46 CFR 197.340(e)	
DE15.3	Verify air supply is checked prior to commencement of all diving operations	46 CFR 197.340(d) 46 CFR 197.340(e)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation.*



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment****Commercial Diving - SCUBA****Task:** CDA-DE16 Inspect diver's equipment**Condition:** *During dive equipment inspection***Standard:** *In compliance with applicable policies, laws, regulations and standards***References:** 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE16.1	Verify self-contained equipment	46 CFR 197.346(a)(1)	
DE16.2	Verify inflatable flotation device	46 CFR 197.346(a)(3)	
DE16.3	Verify operation of weight belt quick release	46 CFR 197.346(a)(4)	
DE16.4	Verify operation of diving wristwatch	46 CFR 197.346(a)(7)	
DE16.5	Verify operation of depth gage	46 CFR 197.346(a)(8) 46 CFR 197.458(a) & (b) 46 CFR 197.458(d)	
DE16.6	Verify face mask	46 CFR 197.346(a)(2)	
DE16.7	Verify knife	46 CFR 197.346(a)(5)	
DE16.8	Verify swim fins or shoes	46 CFR 197.346(a)(6)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts. Step 16.1: 46CFR197.346(a)(1)(ii)(A) includes a manual reserve (J valve) option. It is important for the trainee to know that this requirement is outdated. The current industry practice is to use a "K valve". This valve is the most current version and meets all of the manual reserve requirements for a "J valve".*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)**Certificate of Inspection****Diving Equipment (DE)****Commercial Diving - Surface Supplied****Task:** CDA-DE17 Inspect diver's equipment**Condition:** *During diving equipment inspection***Standard:** *In compliance with applicable policies, laws, regulations and standards***References:** 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DE17.1	Verify presence/condition of heavyweight diving outfit equipment	46 CFR 197.346(b) 46 CFR 197.346(c)	
DE17.2	Verify presence/condition of lightweight diving outfit equipment	46 CFR 197.346(d)	
DE17.3	Verify requirements for primary breathing gas supply	46 CFR 197.346(e) 46 CFR 197.346(f)	
DE17.4	Verify requirements for reserve breathing gas supply	46 CFR 197.346(f) 46 CFR 197.346(g)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts.*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)**Certificate of Inspection****Diving Operations****Commercial Diving - SCUBA****Task:** CDA-DO01 Witness SCUBA diving operation**Condition:** *While witnessing dive operations***Standard:** *In compliance with applicable policies, laws, regulations and standards*

References:

1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
2. COMDTINST M16000.7B Marine Safety Manual Volume II Material Inspection Ch-1

Steps		References	Initials
DO01.1	Verify diver not outside no-decompression limits	46 CFR 197.430(a)(1) 46 CFR 197.430(a)(2)	
DO01.2	Verify equipment for currents	46 CFR 197.430(a)(3)	
DO01.3	Verify presence of standby diver	46 CFR 197.430(c)	
DO01.4	Verify presence of line tender	46 CFR 197.430(d)	
DO01.5	Verify presence of second diver	46 CFR 197.430(e)	
DO01.6	Verify boat availability for diver pick-up	46 CFR 197.430(f)	
DO01.7	Verify diver properly equipped	46 CFR 197.430(b) 46 CFR 197.346	
DO01.8	Verify boat and crew are available	46 CFR 197.402(c)	
DO01.9	Verify SCUBA diving is not a live-boating operation	MSM II/C.1.E.4.b(4)	

Verifying Officer Guidance: *Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts. Trainee shall ensure that all logs, manuals and equipment have been examined prior to commencing dive operations and that no significant safety concern has been identified by vessel or dive personnel. The trainee shall ensure that all specific dive procedures are identified to include the dive profile (depth, time, etc.).*

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)**Certificate of Inspection****Diving Operations****Commercial Diving - Surface Supplied****Task:** CDA-DO02 Witness surface-supplied air diving operation**Condition:** While witnessing dive operations**Standard:** In compliance with applicable policies, laws, regulations, and standards**References:** 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DO02.1	Verify diving depths	46 CFR 197.432(a)	
DO02.2	Verify primary breathing gas supply	46 CFR 197.432(b)	
DO02.3	Verify each diver continuously tended	46 CFR 197.432(c)	
DO02.4	Verify presence of second diver	46 CFR 197.432(d)	
DO02.5	Verify operations deeper than 130 fsw or outside non-decompression limits meet additional requirements	46 CFR 197.432(e)	
DO02.6	Verify diver properly equipped	46 CFR 197.432(f) 46 CFR 197.346	

Verifying Officer Guidance: Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts. Trainee shall ensure that all logs, manuals and equipment have been examined prior to commencing dive operations and that no significant safety concern has been identified by vessel or dive personnel. The trainee shall ensure that all specific dive procedures are identified to include the dive profile (depth, time, decompression and breathing mixture changes).

Inspector's Name: (Last, First, Initial)**EMPLID:****Verifying Officer's Signature:****Date:**

Commercial Diving (CDA)**Certificate of Inspection****Diving Operations****Commercial Diving - Surface Supplied**

Task: CDA-DO03 Witness surface-supplied mixed gas diving operation

Condition: While witnessing dive operations

Standard: In compliance with applicable policies, laws, regulations, and standards

References: 1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision

Steps		References	Initials
DO03.1	Verify decompression chamber, closed bell or diving stage is ready	46 CFR 197.434(a) 46 CFR 197.434(b)	
DO03.2	Verify bell used for dives deeper than 220 feet of saltwater (fsw)	46 CFR 197.434(c)	
DO03.3	Verify closed bell is utilized for dives at depths greater than 300 fsw	46 CFR 197.434(d)	
DO03.4	Verify separate dive team member tends diver	46 CFR 197.434(e)	
DO03.5	Verify presence of standby diver for non-saturation dives	46 CFR 197.434(f)	
DO03.6	Verify a diver is available in closed bell	46 CFR 197.434(h)	
DO03.7	Verify presence of a second diver stationed outside of entry point	46 CFR 197.434(i)	
DO03.8	Verify diver has all equipment	46 CFR 197.434(k) 46 CFR 197.346	
DO03.9	Verify diving operation has primary and secondary breathing gas	46 CFR 197.434(J) 46 CFR 197.340	
DO03.10	Verify availability of stand-by diver for bell recovery	46 CFR 197.434(g)	

Verifying Officer Guidance: Trainee shall demonstrate a working knowledge of equipment's arrangements, components and safe operation. Also, have a basic understanding of engineering principles and concepts. Trainee shall ensure that all logs, manuals and equipment have been examined prior to commencing dive operations and that no significant safety concern has been identified by vessel or dive personnel. The trainee shall ensure that all specific dive procedures are identified to include the dive profile (depth, time, decompression and breathing mixture changes).

Inspector's Name: (Last, First, Initial)

EMPLID:

Verifying Officer's Signature:

Date:

Commercial Diving (CDA)

Certificate of Inspection

Diving Operations

Commercial Diving - Surface Supplied

Task: CDA-DO04 Witness live-boating operation

Condition: While witnessing dive operations

Standard: In compliance with applicable policies, laws, regulations and standards

- References:**
1. Title 46, Code of Federal Regulations Part 197 Marine Occupational Safety & Health Standards - General Provision
 2. COMDTINST M16000.7B Marine Safety Manual Volume II Material Inspection Ch-1

Steps		References	Initials
DO04.1	Verify person in charge is performing duties	46 CFR 197.436(a)	
DO04.2	Verify diving supervisor is performing duties	46 CFR 197.436(c)	
DO04.3	Verify SCUBA not utilized	46 CFR 197.204 MSM II/C.1.E.4.b(4)	
DO04.4	Verify a boat and crew are available	46 CFR 197.402(b)(2)	

Verifying Officer Guidance:



Inspector's Name: (Last, First, Initial)	EMPLID:
Verifying Officer's Signature:	Date:

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**Performance Qualification Standard and Job Aid Change
Recommendation Form**

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Section(s) Affected:

Remark(s)/Comment(s):

Reference(s):

Signature: _____

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