

United States Coast Guard



T-BOAT INSPECTION BOOK

Name of Vessel:		
Official Number:		
Date Completed:		Location:
SOLAS Certificates Issued: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Route		
<input type="checkbox"/> Oceans	<input type="checkbox"/> Limited Coastwise	<input type="checkbox"/> Lakes/Bays/Sounds
<input type="checkbox"/> Coastwise	<input type="checkbox"/> Great Lakes	<input type="checkbox"/> Rivers
Inspection Type		
<input type="checkbox"/> Certification of Inspection (COI)	<input type="checkbox"/> Re-inspection	<input type="checkbox"/> Drydock Inspection
Streamlined Inspection Program (SIP) Participant <input type="checkbox"/> Yes <input type="checkbox"/> No		
Inspectors:		
1.		2.

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IMO Applicability Dates:

Reference	Date
SOLAS 1960	26 MAY 65
SOLAS 1974	25 MAY 80
1978 Protocol to SOLAS 1974	01 MAY 81
1981 Amendments (II-1 & II-2)	01 SEP 84
1983 Amendments (III)	01 JUL 86
Various additional amendments to SOLAS	
MARPOL 73/78 Annex I	02 OCT 83
MARPOL 73/78 Annex V	31 DEC 88
COLREGS 1972	15 JUL 77
Various additional amendments to COLREGS	
Load Line 1966	21 JUL 68
STCW 1978	28 APR 84
1991 Amendments	01 DEC 92
1994 Amendments	01 JAN 96
1995 Amendments	01 FEB 97

This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to IMO publications, CFR's, NVIC's or any locally produced cite guides for specific regulatory references. Not all items in this book are applicable to all vessels. Due to recent regulatory revisions, OLD SUBCHAPTER T cites (applicable to existing vessels on or before March 10, 1996) are provided in addition to new Subchapter T cites. Example (**46 CFR 184.10-1**)

NOTE: *Guidance on how to conduct inspections on U.S. flagged SPV can be found in Marine Safety Manual ([MSM](#)) Volume II, Chapter B1: [Inspection of Vessels for Certification](#). All MSM cites listed in this book refer to MSM Volume II, unless otherwise indicated.*

Involved Parties & General Information:

Vessel's Representatives:
Phone Numbers:

Owner-Listed on DOC (if applicable)
<input type="checkbox"/> No Change

Operator:
<input type="checkbox"/> No Change

Conversions:

Distance and Energy				
Kilowatts (kW)	X	1,341	=	Horsepower (hp)
Feet (ft)	X	3.281	=	Meters (m)
Long Ton (LT)	X	.98421	=	Metric Ton (t)
Liquid (NOTE: Values are approximate.)				
Liquid	bbl/LT	m ³ /t	bbl/m ³	bbl/t
Freshwater	6.40	1.00	6.29	6.29
Saltwater	6.24	.975	6.13	5.98
Heave Oil	6.77	1.06	6.66	7.06
DFM	6.60	1.19	7.48	8.91
Lube Oil	7.66	1.20	7.54	9.05
Weight				
1 Long Ton	= 2240 lb	1 Metric Ton	= 2204 lb	
1 Short Ton	= 2000 lb	1 Cubic Foot	= 7.48 gal	
1 Barrel (oil)	= 5.61 ft = 42 gal = 6.29	1 psi	= .06895 Bar = 2.3106 ft of water	
Temperature: Fahrenheit = Celsius (F= 9/5 C+32 and C=5/9 (F-32))				
0	= -17.8	80	= 26.7	200 = 93.3
32	= 0	90	= 32.2	250 = 121.1
40	= 4.4	100	= 37.8	300 = 148.9
50	= 10.0	110	= 43.3	400 = 204.4
60	= 15.6	120	= 48.9	500 = 260
70	= 21.1	150	= 65.6	1000 = 537.8
Pressure:				
1 Bar	= 14.5 psi	5 Bars	= 72.5 psi	9 Bars = 130.5 psi
2 Bars	= 29.0 psi	6 Bars	= 87.0 psi	10 Bars = 145.0 psi
3 Bars	= 43.5 psi	7 Bars	= 101.5 psi	
4 Bars	= 58.0 psi	8 Bars	= 116.0 psi	

Conversions:

ALUMINUM PLATE			
Decimal	MM Standard Plate	Wastage MM @ 25	Aluminum Wastage Allowances, Conventional Vessels Under 90 M (295 Feet) built to ABS Class
.1969	5mm	3.75mm	Main Deck Plating 15%
.2362	6mm	4.50mm	Bottom Plating 15%
.2756	7mm	5.25mm	Keel Plating 15%
.3150	8mm	6.00mm	Sheer Strake 15%
.3543	9mm	6.75mm	Bilge Strake 15%
.3937	10mm	7.50mm	Side Shell Plating 20%
.4331	11mm	8.25mm	Forecastle 20%
.4724	12mm	9.00mm	Internals and Bulkheads 20%
.5118	13mm	9.75mm	
.5519	14mm	10.50mm	

Vessel Information:

Last Drydocking date:		Next Drydocking date:
Location of Last Drydocking:		
Built Date (use delivery date):		
Overall Length (in feet):		
Maximum Passenger Allowed:		
Overnight Accommodations:		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> If yes, how many?

Task 1: Pre-Inspection Administrative Items

Step	Action	Ref
1.1	<input type="checkbox"/> Retrieve notice of arrival.	
1.2	<input type="checkbox"/> Review MISLE records/local file. <ul style="list-style-type: none"> • Special notes • Deficiency history • Vessel Critical Profile (VCP) • Determine user fee payment status 	46CFR 2.10
1.3	<input type="checkbox"/> Determine proper type/scope of inspection. <ul style="list-style-type: none"> • Certificate of inspection (COI) • Obtain application of inspection • Annual • Hull/Drydock 	46CFR 176.400 46CFR 176.105 46 CFR 176.500 46 CFR 176.600
1.4	<input type="checkbox"/> Prepare statutory certificates. <ul style="list-style-type: none"> • Temporary COI • SOLAS Passenger Ship Safety Certificate 	46CFR VOL II 46CFR176.910
1.5	<input type="checkbox"/> Review regulatory applicability dates for “new” or “existing” vessels. <ul style="list-style-type: none"> • CFR 	46CFR 175.400

Notes:

Conversions:

STEEL PLATE			
Fractions	Decimal	MM Standard Plate	Wastage Standard / MM @ 25
1/8	.125	3.175mm	.0938 / 2.381
1/4	.250	6.35mm	.1875 / 4.7625
3/8	.375	9.52mm	.2812 / 7.14
1/2	.500	12.70mm	.3750 / 9.525
5/8	.625	15.78mm	.4688 / 11.906
3/4	.750	19.05mm	.5625 / 14.287
7/8	.875	22.22mm	.6566 / 16.66
1	1.00	25.40mm	.7500 / 19.05
1 1/8	1.125	28.57mm	8430 / 21.431
1 1/4	1.250	31.75mm	
1 3/8	1.375	34.92mm	
1 1/2	1.500	38.10mm	
1 5/8	1.625	41.27mm	
1 3/4	1.750	44.45mm	
1 7/8	1.875	47.62mm	
2	2.00	50.8mm	

Task 4: Logs and Manuals

Step	Action	Ref
4.1	<input type="checkbox"/> Examine current training records/logs. <ul style="list-style-type: none"> • Date and general description of training topics • Training record/log for each crewmember 	46 CFR 185.420
4.2	<input type="checkbox"/> Examine emergency training and drills logs. <ul style="list-style-type: none"> • Fire – Man Overboard – Abandon ship • Date of drill and training with general description 	46 CFR 185.520 46 CFR 185.524
4.3	<input type="checkbox"/> Examine lifesaving equipment maintenance. <ul style="list-style-type: none"> <input type="checkbox"/> Required maintenance documented <input type="checkbox"/> Manufacturer's Instructions on board for survival craft, rescue boats, and launching appliances for vessels more than 65 feet <input type="checkbox"/> Weekly maintenance inspections survival craft, rescue boat, and launching appliance <input type="checkbox"/> Monthly inspections survival craft, rescue boat, and launching appliance <input type="checkbox"/> Quarterly inspections of winch control apparatus of the launching appliance <input type="checkbox"/> Annual inspections; rescue boat stripped, cleaned, and thoroughly inspected <input type="checkbox"/> Annual inspections; davit, winch, falls, or other launching appliance thoroughly inspected <input type="checkbox"/> Shore-Base Maintenance report for EPIRB <input type="checkbox"/> Steering gear test and drill <input type="checkbox"/> Monthly test of EPIRB 	46 CFR 185.702 46 CFR 185.720 SOLAS III/20.6 46 CFR 185.722 SOLAS III/20.7 46 CFR 185.724 46 CFR 185.726 46 CFR 185.726 SOLAS IV/ 15 SOLAS V/26 46 CFR 185.728

Notes:

Task 18 Post-Inspection Items

Step	Action	Ref
18.1	<input type="checkbox"/> Issue letters.	
18.2	<input type="checkbox"/> Complete MISLE entries.	
18.3	<input type="checkbox"/> Initiate report of violation (if necessary).	

Notes:

Task 17: Drydock and Ground Tackle (Continued)

Step	Action	Ref
17.10	<input type="checkbox"/> Inspect internal structural members. <ul style="list-style-type: none"> <input type="checkbox"/> Frames <input type="checkbox"/> Floors <input type="checkbox"/> Shelves, brackets, clamps <input type="checkbox"/> Bulkheads <input type="checkbox"/> Tank tops 	46 CFR 176.610 FRP NVIC 8-87 Steel NVIC 7-68 Wood NVIC 7-95
17.11	<input type="checkbox"/> Inspect for watertight integrity. <ul style="list-style-type: none"> <input type="checkbox"/> Hull openings and closures <input type="checkbox"/> Deck openings and closures <input type="checkbox"/> Watertight doors <input type="checkbox"/> Watertight subdivisions/bulkheads 	46 CFR 176.802 46 CFR 176.124 MSM Vol IV CH 6.I.5
17.12	<input type="checkbox"/> Inspect for stability. <ul style="list-style-type: none"> <input type="checkbox"/> Drainage <input type="checkbox"/> Major changes/modifications <input type="checkbox"/> Solid fixed ballast 	46 CFR 171 (H)
17.13	<input type="checkbox"/> Inspect ground tackle. <ul style="list-style-type: none"> <input type="checkbox"/> Anchor <input type="checkbox"/> Cable 	46 CFR 184.300 46 CFR 184.10

Notes:

Task 4: Logs and Manuals

Step	Action	Ref
4.4	<input type="checkbox"/> Verify presence of training manual. (SOLAS only)	SOLAS III/35
4.5	<input type="checkbox"/> Examine official logbook. <ul style="list-style-type: none"> • Vessels on a Foreign Voyage 	46 CFR 185.280
4.6	<input type="checkbox"/> Verify crew and passenger list maintained (Ocean/Coastwise {O\C} and overnight or disembark or embark at different ports).	46 CFR 185.502
4.7	<input type="checkbox"/> Verify voyage plan prepared (O/C or overnight).	46 CFR 185.503
4.8	<input type="checkbox"/> Verify passenger count.	46 CFR 185.504
4.9	<input type="checkbox"/> Verify safety orientation.	46 CFR 185.506

Notes:

Task 5: Navigation Safety Systems

Step	Action	Ref
5.1	<input type="checkbox"/> Verify navigation publications and charts. <input type="checkbox"/> Current and corrected charts (large enough for safe navigation) <input type="checkbox"/> U.S. Coast Pilot <input type="checkbox"/> Coast Guard Light List <input type="checkbox"/> Tide tables <input type="checkbox"/> Tidal current tables <input type="checkbox"/> Rules of the Road (COLREGS)	46 CFR 184.420
5.2	<input type="checkbox"/> Test navigation lights and signals (Vessels >65 feet must meet UL 1104).	46 CFR 183.420 33 CFR Part 84
5.3	<input type="checkbox"/> Test radars (O/C/LC/GL and >49 passengers).	46 CFR 184.404
5.4	<input type="checkbox"/> Inspect magnetic compass. (Except rivers and short restricted routes)	46 CFR 184.402
5.5	<input type="checkbox"/> Inspect Sound Signaling devices <input type="checkbox"/> Whistle/horn <input type="checkbox"/> Bell proper size	33 CFR 86

Notes:

Task 17: Drydock and Ground Tackle (Continued)

Step	Action	Ref
17.6	<input type="checkbox"/> Airports below weatherdecks <input type="checkbox"/> Dogs or other securing appliance <input type="checkbox"/> Rims or seats <input type="checkbox"/> Glass <input type="checkbox"/> Dead covers <input type="checkbox"/> Hinges and lugs	MSM Vol. IV Ch 6.1.4
17.7	<input type="checkbox"/> Self-bailers and cockpit freeing ports <input type="checkbox"/> Check valves <input type="checkbox"/> Required area	46 CFR 178.420
17.8	<input type="checkbox"/> Compartment or inner bottom drains (drydocking drains) <input type="checkbox"/> Secure plugs	
17.9	<input type="checkbox"/> Inspect thru-hull fittings. <input type="checkbox"/> Sea chests <input type="checkbox"/> Sea valves (must be fitted on all fittings within 6 inches of deepest load waterlight) <input type="checkbox"/> Keel/grid coolers <input type="checkbox"/> Bow/stern thrusters <input type="checkbox"/> Transducers <input type="checkbox"/> Shaft packings <input type="checkbox"/> Rudder packings	46 CFR 171.119 46 CFR 176.610 46 CFR 176.630 MSM Vol II CH B.3.D.2

Notes:

Task 17: Drydock and Ground Tackle

Step	Action	Ref
17.1	<input type="checkbox"/> Verify Marine Chemist Certificate (If required).	46 CFR 176.710
17.2	<input type="checkbox"/> Inspect external structural members. <input type="checkbox"/> Shell <input type="checkbox"/> Keel and bilge keel <input type="checkbox"/> High stress locations <input type="checkbox"/> Caulking <input type="checkbox"/> Welds	46 CFR 176.610 Aluminum NVIC 11-80 FRP NVIC 8-87 Steel NVIC 7-68 Wood NVIC 7-95
17.3	<input type="checkbox"/> Inspect running gear. <input type="checkbox"/> Rudders <input type="checkbox"/> Propellers <input type="checkbox"/> Tailshaft(s)	46 CFR 176.610
17.4	<input type="checkbox"/> Inspect fastenings. <input type="checkbox"/> Hull fastenings <input type="checkbox"/> Keel bolts <input type="checkbox"/> Attachments/appendages	46 CFR 176.610 Wood NVIC 7-95
17.5	<input type="checkbox"/> Examine Hull Markings. <input type="checkbox"/> Draft marks (>65 feet or SOLAS) <input type="checkbox"/> Load marks (>65 feet or SOLAS) <input type="checkbox"/> Load line (vsl>79 feet) <input type="checkbox"/> Name/ hailing port/ state number	46 CFR 185.602

Notes:

Task 5: Navigation Safety Systems (Continued)

Step	Action	Ref
5.6	<input type="checkbox"/> Inspect Signaling devices (distress) <input type="checkbox"/> Flares and day smokes (correct number and expiration) <input type="checkbox"/> Stowed in brightly colored, portable watertight container <input type="checkbox"/> Marked "Distress Signals" <input type="checkbox"/> Substitutions with proper expiration date	46 CFR 180.68 46 CFR 185.614
	IF vessel travels Oceans / Coastwise / Limited Coastwise / Great Lakes Route Lakes, Bays, Sounds / Rivers Route	THEN it MUST carry: 6 red hand flares and 6 orange day smokes 3 red hand flares and 3 orange day smokes
5.7	<input type="checkbox"/> Test internal communications. <input type="checkbox"/> A fixed means of two-way communication from: <ul style="list-style-type: none"> • Operating station to machinery space (single screw vessels) • Operating station to auxiliary steering (single screw vessels) • Handheld radios acceptable 	46 CFR 184.602
5.8	<input type="checkbox"/> Test public address system.	46 CFR 184.610
	IF vessels is:	AND carries:
> 65 feet in length	—————→	THEN vessel MUST have:
≤ 65 feet in length		Fixed installation
≤ 65 feet in length	> 49 passengers	Battery bullhorn
≤ 65 feet in length	≤ 49 passengers	NONE required

Notes:

Task 5: Navigation Safety Systems (Continued)

Step	Action	Ref
5.9	<input type="checkbox"/> Verify propulsion engine control. <ul style="list-style-type: none"> <input type="checkbox"/> Two independent means of controlling each propulsion engine <input type="checkbox"/> Multiple engine vessel with independent remote propulsion control for each engine does not need a second means <input type="checkbox"/> Must have engine shutdowns at the operating station 	46 CFR 184.620
5.10	<input type="checkbox"/> Engine operating gauges, rpm, jacket water, and lube oil pressure readily visible at the operating station	46 CFR 182.410 (b)
5.11	<input type="checkbox"/> Verify radio equipment operation	46 CFR 184.502 47 CFR 80.905

IF vessel travels	THEN it MUST carry:
More than 1,000 feet from shore but less than 20 NM	1 VHF
20 NM to 100 NM	1 VHF and 1 MF
100 NM to 200 NM	1 VHF, 1 MF, 1 SSB or INMARSAT radio, and 1 NAVTEX receiver.
More than 200 NM	1 VHF, 1 MF, 1 SSB or INMARSAT radio, and 1 NAVTEX receiver, 1 distress frequency receiver, and 1 automatic radiotelephone alarm signal generator

Vessels 65 ft and over, operating in VTS waters, are required at least two VHF radios. One radio must be tuned to the VTS frequency under 33 CFR 161.12 as per 33 CFR 26.03(f)

Notes:

Task 16: Plan Review for Modifications (Continued)

Step	Action	Ref
16.4	<input type="checkbox"/> Determine if any of the following have been installed or replaced onboard a vessel.	46 CFR 176.702

If item is...	Then conduct...
launching appliance; survival craft; rescue boat; fixed gas fire extinguishing system; machinery; fuel tank; or pressure vessel.	inspections and tests required by 46 CFR 176.402 (d)

16.5	<input type="checkbox"/> Ensure vessel's current condition is properly documented in MISLE and vessel's file.
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Notes:

Task 16: Plan Review for Modifications

Step	Action	Ref
16.1	<input type="checkbox"/> Verify that vessel's construction/equipment remains unchanged. <ul style="list-style-type: none"> • Wind profile • Stability characteristics • Engines • Ballast has not been added/deleted/moved • Tankage capacity has not increased/decreased/moved 	46 CFR 178.320 (d)
16.2	<input type="checkbox"/> Verify that vessel meets subdivision requirements (if applicable). <ul style="list-style-type: none"> • Watertight bulkheads have not been moved or removed • No unauthorized openings have been placed in watertight bulkheads 	46 CFR 179.210
16.3	<input type="checkbox"/> Verify that the OCMI has approved all repairs and/or alterations that affect the safety of the vessel. <ul style="list-style-type: none"> • Replacement, repair, or refastening of deck or hull planking, plating, and structural members • Repair of plate or frame cracks • Damage repair or replacement, other than replacement in kind, of electrical wiring, fuel lines, tanks, boilers and other pressure vessels, and steering, propulsion, and power supply systems • Alterations affecting stability • Repair or alteration of lifesaving, fire detecting, or fire extinguishing equipment 	46 CFR 176.700 (a)

Notes:

Task 5: Navigation Safety Systems (Continued)

Step	Action	Ref
5.12	<input type="checkbox"/> Verify emergency broadcast placard is posted next to all radio installations.	46 CFR 184.506
5.13	<input type="checkbox"/> Verify that the emergency instructions are posted.	46 CFR 185.510
5.14	<input type="checkbox"/> Witness operation of electronic position fixing device (oceans only).	46 CFR 184.410
5.15	<input type="checkbox"/> Inspect EPIRB (high seas or >3 nautical miles on Great Lakes). <ul style="list-style-type: none"> • Hydrostatic release date – 2yrs • NOAA Registration – 2yrs • Battery - per manufacture • Name of vessel 	46 CFR 180.64 46 CFR 185.740 (b) 46 CFR 185.604 (c) 47 CFR 80.1061 (f)
5.16	<input type="checkbox"/> Inspect bridge windows.	46 CFR 177.1010
5.17	<input type="checkbox"/> Test bridge steering system and steering gear.	46 CFR 182.600
5.18	<input type="checkbox"/> Inspect propulsion shaft tachometer (SOLAS only).	SOLAS CH II-1/31
5.19	<input type="checkbox"/> Inspect navigational warning system/NAVTEX.	SOLAS CH IV/7
5.20	<input type="checkbox"/> Inspect speed/distance indicator, 9 GHZ radar echo-depth sounder(SOLAS only).	SOLAS CH V/19/2.3
5.21	<input type="checkbox"/> Verify voyage data recorder (SOLAS only).	SOLAS CH V/20

Notes:

Task 6: Structural Integrity

Step	Action	Ref
6.1	<input type="checkbox"/> Examine external hull structure. <input type="checkbox"/> Decks <input type="checkbox"/> Shell <input type="checkbox"/> Bulkheads <input type="checkbox"/> Strength members <input type="checkbox"/> Visible damage <input type="checkbox"/> Bulwarks, rails, and guards <input type="checkbox"/> Welds	46 CFR 176.802 Aluminum NVIC 11-80 FRP NVIC 8-87 Steel NVIC 7-68 Wood NVIC 7-95
6.2	<input type="checkbox"/> Review stability letter. <input type="checkbox"/> Drainage (scuppers/freeing ports) <input type="checkbox"/> Major changes/modifications affecting wind/heal sail area or weight <input type="checkbox"/> Solid fixed ballast	46 CFR 171 H
6.3	<input type="checkbox"/> Examine hull markings. <input type="checkbox"/> Draft marks and load marks (>65 feet or SOLAS) <input type="checkbox"/> Load line (vsl >79 feet) <input type="checkbox"/> Name/hailing port/ state number <input type="checkbox"/> Official number permanently affixed to interior structural member	46 CFR 185.602 46CFR 185.30-3 46 CFR 67.123 46 CFR 67.121

Notes:

Task 15: Man Overboard Drill (Continued)

Step	Y	N	Action
15.10	<input type="checkbox"/>	<input type="checkbox"/>	Did crewmembers communicate effectively with Master, other crewmembers, and passengers?
15.11	<input type="checkbox"/>	<input type="checkbox"/>	When alongside, did the crew members have a plan for retrieving the victim? <input type="checkbox"/> Y <input type="checkbox"/> N Did they use a boat hook or fish gaff to retrieve the victim? <input type="checkbox"/> Y <input type="checkbox"/> N Did they use a ring life buoy or other safe lifesaving device to reign in the victim?
15.12	<input type="checkbox"/>	<input type="checkbox"/>	When the victim was recovered, did the crew complete basic first aid that included the ABCs?
15.13	<input type="checkbox"/>	<input type="checkbox"/>	Did the drill follow the training and operations manual, or emergency instructions?
15.14	<input type="checkbox"/>	<input type="checkbox"/>	Was the drill satisfactory?

Notes:

Task 15: Man Overboard Drill

Step	Y	N	Action
15.1	<input type="checkbox"/>	<input type="checkbox"/>	Did the crew throw Oscar or fender overboard?
15.2	<input type="checkbox"/>	<input type="checkbox"/>	Did the crewmember call out "man overboard" and which side of the vessel the victim fell over, throw ring life buoy or PFD, fender, or other flotsam overboard and begin pointing to victim?
15.3	<input type="checkbox"/>	<input type="checkbox"/>	Did crewmember throw ring life buoy, PFD, fender, or other flotsam over?
15.4	<input type="checkbox"/>	<input type="checkbox"/>	If at night, was the waterlight attached to the life ring buoy and, was it deployed immediately?
15.5	<input type="checkbox"/>	<input type="checkbox"/>	Did the Master mark vessel's position, and conduct a Williamson turn to get on reciprocal course (if man overboard is not in sight) or a destroyer turn (if man overboard is still in sight)?
15.6	<input type="checkbox"/>	<input type="checkbox"/>	Did the Master sound danger signal, mark position, course and speed, announce situation to crew/passengers and make the call to local CG or vessels in surrounding area?
15.7	<input type="checkbox"/>	<input type="checkbox"/>	Did the Master control situation from helm, make announcements, and communicate effectively with crew?
15.8	<input type="checkbox"/>	<input type="checkbox"/>	Did the Master approach the victim with a plan and was he successful?
15.9	<input type="checkbox"/>	<input type="checkbox"/>	Did the crewmembers properly don PFDs, take control of the situation, and direct passengers as appropriate?

Notes:

Task 6: Structural Integrity (Continued)

Step	Action	Ref
6.4	<input type="checkbox"/> Examine internal compartment structures. <ul style="list-style-type: none"> <input type="checkbox"/> Frames <input type="checkbox"/> Floors <input type="checkbox"/> Shelves, brackets, clamps <input type="checkbox"/> Bulkheads <input type="checkbox"/> Ventilation 	46 CFR 176.802 Aluminum NVIC 11-80 FRP NVIC 8-87 Steel NVIC 7-68 Wood NVIC 7-95
6.5	<input type="checkbox"/> Examine watertight integrity. <ul style="list-style-type: none"> <input type="checkbox"/> Hull openings and closures <input type="checkbox"/> Deadlight covers <input type="checkbox"/> Deck openings and closures <input type="checkbox"/> Sill heights, combings, knife edges, gaskets, hardware <input type="checkbox"/> Watertight doors and subdivision bulkheads <input type="checkbox"/> Piping <input type="checkbox"/> Free of sluice valves 	46 CFR 176.802 46 CFR 179.360 46 CFR 171.24 Wood NVIC 7-95 NVIC 2-62 46 CFR 182.720 (d) 46CFR 182.40-1 46 CFR 179.320 (d)
6.6	<input type="checkbox"/> Examine Scuppers / Freeing ports <ul style="list-style-type: none"> <input type="checkbox"/> Vessels with cockpit <input type="checkbox"/> Vessels with well deck 	46 CFR 171.145 46 CFR 171.150
6.7	<input type="checkbox"/> Examine dead light covers on port lights below main deck	46 CFR 171.117 46 CFR 179.350
6.8	<input type="checkbox"/> Inspect rails. <ul style="list-style-type: none"> <input type="checkbox"/> Deck rails (39.5 Inches minimum and 200 pound point load minimum) <input type="checkbox"/> Storm rails 	46 CFR 177.900 46 CFR 177.920

Notes:

Task 7: General Health and Safety Systems

Step	Action	Ref
7.1	<input type="checkbox"/> Test general alarms (vessels with overnight accommodations).	46 CFR 183.550
7.2	<input type="checkbox"/> Verify upper decks marked for maximum number of passengers as per stability letter.	46 CFR 185.602g
7.3	<input type="checkbox"/> Inspect crew spaces. <ul style="list-style-type: none"> • Overnight accommodations 	46 CFR 177.700 46 CFR 177.710 46 CFR 177.25
7.4	<input type="checkbox"/> Inspect passenger accommodations. <ul style="list-style-type: none"> • Overnight accommodations • Seating 	46 CFR 177.800 46 CFR 177.30
7.5	<input type="checkbox"/> Verify means of escape. <ul style="list-style-type: none"> <input type="checkbox"/> Two widely separated <input type="checkbox"/> Adequate size <input type="checkbox"/> Operable for either side <input type="checkbox"/> Open towards expected escape direction <input type="checkbox"/> Properly Marked 	46 CFR 177.500 46 CFR 185.606
7.6	<input type="checkbox"/> Inspect cooking and heating system. <ul style="list-style-type: none"> <input type="checkbox"/> Clear of combustible materials <input type="checkbox"/> Properly fitted/installed for use in heavy seas <input type="checkbox"/> No open flames without approval certification <input type="checkbox"/> Grease trap <input type="checkbox"/> Remote shutoff valve for gas systems <input type="checkbox"/> No continuous pilot lights or glow plugs <input type="checkbox"/> Ventilation ducts above frying vats or grills constructed of >11 gage steel <input type="checkbox"/> Gas systems <input type="checkbox"/> Cooking equipment, grab rails/sea rails 	46 CFR 177.410 46 CFR 184.210 46 CFR 184.240 46 CFR 184.220

Notes:

Task 14: Abandon Ship Drill

Step	Y	N	Action
14.1	<input type="checkbox"/>	<input type="checkbox"/>	Advise crew the vessel is sinking and cannot be saved.
14.2	<input type="checkbox"/>	<input type="checkbox"/>	Did the Master simulate broadcasting a mayday on the VHF radio and provide the vessels position, number of persons on board, and type of distress?
14.3	<input type="checkbox"/>	<input type="checkbox"/>	Were life preservers properly donned by crew and passengers?
14.4	<input type="checkbox"/>	<input type="checkbox"/>	Did the crew have a plan (demonstrate as necessary) on how to deploy and marshal the vessel's primary lifesaving devices?
14.5	<input type="checkbox"/>	<input type="checkbox"/>	Did the Master simulate activating the vessel's 406 EPIRB?
14.6	<input type="checkbox"/>	<input type="checkbox"/>	Did the drill following the training and operations manual or SOLAS training materials note or emergency instructions or other placards posted?
14.7	<input type="checkbox"/>	<input type="checkbox"/>	Was the drill satisfactory?

Notes:

Task 13: Fire Drill

Step	Y	N	Action
13.1	<input type="checkbox"/>	<input type="checkbox"/>	Advise crew smoke and flames coming from a space.
13.2	<input type="checkbox"/>	<input type="checkbox"/>	Did crewmember sound alarm?
13.3	<input type="checkbox"/>	<input type="checkbox"/>	Did crewmember attempt an initial action?
13.4	<input type="checkbox"/>	<input type="checkbox"/>	Did the Master turn the vessel into the wind, slow down, etc, and make announcements to crew/passengers and make the call to local CG or vessels in the surrounding area?
13.5	<input type="checkbox"/>	<input type="checkbox"/>	Did Master control situation from helm, make announcements, and communicate effectively with crew?
13.6	<input type="checkbox"/>	<input type="checkbox"/>	Did crewmembers take control of situation and direct passengers as appropriate?
13.7	<input type="checkbox"/>	<input type="checkbox"/>	Did crewmembers communicate effectively with Master, other crewmembers, and passengers?
13.8	<input type="checkbox"/>	<input type="checkbox"/>	Was a charged firemain or fire buckets provided?
13.9	<input type="checkbox"/>	<input type="checkbox"/>	Did crewmember effectively fight the fire with portable fire extinguishers, close off ventilation closures, secure power and fuel?
13.10	<input type="checkbox"/>	<input type="checkbox"/>	If available, did the crew know how to operate and deploy the Fixed Fire Extinguishing System and/or fire pump?
13.11	<input type="checkbox"/>	<input type="checkbox"/>	Did the crew understand what agent they were using?
13.12	<input type="checkbox"/>	<input type="checkbox"/>	Did the drill follow the training and operations manual, the emergency instructions, or other placards posted?
13.13	<input type="checkbox"/>	<input type="checkbox"/>	Was the drill satisfactory?

Notes:

Task 7: General Health and Safety Systems (Continued)

Step	Action	Ref
7.7	<input type="checkbox"/> Conduct sanitation inspection. <input type="checkbox"/> Quarters <input type="checkbox"/> Toilets/washrooms <input type="checkbox"/> Galleys <input type="checkbox"/> Pantries <input type="checkbox"/> Lockers and similar spaces	46 CFR 176.818
7.8	<input type="checkbox"/> Verify presence of first aid kit. <input type="checkbox"/> Marked "First Aid Kit" <input type="checkbox"/> Watertight container <input type="checkbox"/> Easily visible and readily available to crew <input type="checkbox"/> Must be Coast Guard Approved	46 CFR 184.710 46 CFR 160.041
7.9	<input type="checkbox"/> Inspect ventilation systems. <input type="checkbox"/> Adequate ventilation to enclosed spaces normally occupied <input type="checkbox"/> Must be capable of being shut down from the pilot house	46 CFR 177.600
7.10	<input type="checkbox"/> Inspect portable lights. <input type="checkbox"/> At least two on board <input type="checkbox"/> Located at operating station and at access to propulsion machinery space	46 CFR 183.430
7.11	<input type="checkbox"/> Ensure no unsafe conditions or practices exist. <input type="checkbox"/> Slips, trips, and falls <input type="checkbox"/> Sharp edges <input type="checkbox"/> Swinging loads/gear adrift	46 CFR 176.830
7.12	<input type="checkbox"/> Ensure proper ground tackle	46 CFR 184.300 46 CFR 184.10
7.13	<input type="checkbox"/> Ensure sailing and rigging	46 CFR 177.330

Notes:

Task 8: Lifesaving Equipment

Step	Action	Ref
8.1	<input type="checkbox"/> Inspect life preservers. <ul style="list-style-type: none"> <input type="checkbox"/> Adequate number of PFDs <input type="checkbox"/> PFDs are USCG-approved <input type="checkbox"/> PFDs are serviceable and in good repair <input type="checkbox"/> Inflatable PFDs are serviced annually <input type="checkbox"/> PFDs are marked with vessel's name <input type="checkbox"/> PFDs are correctly marked with retro-reflective tape <input type="checkbox"/> PFDs are correctly fitted with approved serviceable lights (O/C only) <input type="checkbox"/> Light batteries are in working order and not expired <input type="checkbox"/> Each PFD is fitted with a whistle (SOLAS only) <input type="checkbox"/> Immersion suit 	46 CFR 180.71 a 46 CFR 185.604 46 CFR 180.75 SOLAS III/7/3
8.2	<input type="checkbox"/> Inspect life preserver stowage. <ul style="list-style-type: none"> <input type="checkbox"/> Life preservers readily accessible and distributed throughout accommodation spaces <input type="checkbox"/> Stowage containers are not capable of being locked and when practical allow life preservers to float free <input type="checkbox"/> Overhead PFDs stowed for quick release <input type="checkbox"/> If stowed more than 7 feet above deck, release must be operable from the deck (not applicable to existing vessels (OLD T)) <input type="checkbox"/> Stowage space clearly marked with "Life Preservers," "Child or Adult," and quantity <input type="checkbox"/> Child-size PFDs stowed separately 	46 CFR 180.78 (a) 46 CFR 185.604 (f)

Notes:

Task 12: Pollution Prevention Systems

Step	Action	Ref
12.1	Verify oil pollution placard posted. (Vsl >26 ft in length)	33 CFR 155.450
12.2	<input type="checkbox"/> Verify garbage placard. (Vsl >26 ft in length) <ul style="list-style-type: none"> <input type="checkbox"/> Prominent locations: readable by crew and passengers 	33 CFR 151.59
12.3	<input type="checkbox"/> Examine marine sanitation device. <ul style="list-style-type: none"> • Operable • Labeled type I, II, or III (not required for type IIIs that store affluent at ambient air pressure and temperature) 	33 CFR 159.7
12.4	<input type="checkbox"/> Verify bilges are free of debris and excessive amounts of oil.	46 CFR 176.830

Notes:

Task 11: Electrical (Continued)

Step	Action	Ref
11.09	<input type="checkbox"/> Inspect general electrical installation. <ul style="list-style-type: none"> <input type="checkbox"/> If individual wires, rather than cable, are used in systems greater than 50 volts, the wire must be in conduit. <input type="checkbox"/> All cable and wire must have stranded copper conductors with sufficient current carrying capacity for the circuit in which they are used; <input type="checkbox"/> Be protected from the weather; <input type="checkbox"/> Be installed with metal supports spaced not more than 24 inches apart, and in such a manner as to avoid chafing and other damage. <input type="checkbox"/> Operationally test electrical apparatus, which operates as part of or in conjunction with a fire detection or alarms system installed on board the vessel, by simulating, as closely as practicable, the actual operation in case of fire; and <input type="checkbox"/> Operationally test of all emergency electrical systems <input type="checkbox"/> A portable or temporary electric cord or cable must be constructed and used in compliance with the requirements of Sec. 111.60-13 in subchapter J of this chapter for a flexible electric cord or cable 	46 CFR 183.340 46 CFR 183.05-40 46 CFR 183.05-45 46 CFR 183.05-50 46 CFR 183.10-20 46 CFR 176.806 (g) 46 CFR 176.806 (h) 46 CFR 183.340 (r)
11.10	<input type="checkbox"/> Inspect over current protection.	46 CFR 183.380

Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.3	<input type="checkbox"/> Inspect work vests. <ul style="list-style-type: none"> <input type="checkbox"/> Additional PFDs must be USCG approved <input type="checkbox"/> Additional PFDs are in serviceable condition <input type="checkbox"/> Inflatable PFDs serviced by an approved facility 	46 CFR 180.72 (b)
8.4	<input type="checkbox"/> Inspect work vest stowage. <ul style="list-style-type: none"> <input type="checkbox"/> Stowed separately and in a manner so as not to be confused with passenger PFDs 	46 CFR 180.78 (b)
8.5	<input type="checkbox"/> Verify that lifejacket donning placards are properly posted or available to the passengers.	46 CFR 185.516
8.6	<input type="checkbox"/> Examine ring lifebuoys and water lights. <ul style="list-style-type: none"> <input type="checkbox"/> Appropriate number of USCG-approved ring life buoys on board <input type="checkbox"/> Must be orange on ocean or coastwise route <input type="checkbox"/> Vessel <26ft in length may carry 20" rings <input type="checkbox"/> In serviceable condition <input type="checkbox"/> Properly marked with vessel's name in block capital letters <input type="checkbox"/> Properly marked with retro-reflective tape <input type="checkbox"/> At least one fitted with approved water light <input type="checkbox"/> Water lights are serviceable and batteries are replaced by their marked expiration date or if not marked, replaced annually <input type="checkbox"/> Water light is attached with a lanyard at least 3 feet in length and secured around the body of the buoy <input type="checkbox"/> If only one is carried, water light is to be attached to lanyard with a corrosion resistant clip to allow quick disconnect <input type="checkbox"/> Stowage not permanently secured 	46 CFR 180.70 46 CFR 185.604 46 CFR 160.50 46 CFR 180.75

Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.7	<input type="checkbox"/> Verify number and type of survival craft.	46 CFR 180.200 (c)
8.8	<input type="checkbox"/> Inspect inflatable life rafts and inflatable buoyant apparatus (IBA). <input type="checkbox"/> USCG-approved <input type="checkbox"/> Meets approved capacity as noted on approval plate <input type="checkbox"/> Properly equipped <input type="checkbox"/> Has been serviced during the previous 12 months or immediately if container is damaged, or seals or straps are broken <input type="checkbox"/> Marked with vessel's name and port of registry <input type="checkbox"/> L/R-SOLAS A or B pack; IBA-per manufacturer's outfit	46 CFR 180.175 46 CFR 180.200 NVIC 2-63
8.10	<input type="checkbox"/> Inspect life floats and buoyant apparatus. <input type="checkbox"/> USCG-approved <input type="checkbox"/> Has sufficient capacity as noted on approved label <input type="checkbox"/> In serviceable condition <input type="checkbox"/> Marked clearly with vessel's name and capacity <input type="checkbox"/> Properly outfitted, pendants, painters, and lights <input type="checkbox"/> Marked with retro-reflective tape	46 CFR 180.200 46 CFR 180.175 NVIC 4-86 46 CFR 185.700 46 CFR 185.604 46 CFR 160.010-8 NVIC 1-83
8.11	<input type="checkbox"/> Verify that lifesaving placards are posted. <input type="checkbox"/> Inflatable survival craft placards	46 CFR 185.518

Notes:

Task 11: Electrical (Continued)

Step	Action	Ref
11.7	<input type="checkbox"/> Inspect portable lighting.	46 CFR 183.430
11.8	<input type="checkbox"/> Test emergency lighting. <input type="checkbox"/> Ensure each vessel has adequate emergency lighting fitted along the line of escape to the main deck from all passenger and crew accommodation spaces located below the main deck <input type="checkbox"/> The emergency lighting required by paragraph (a) of this section must automatically actuate upon failure of the main lighting system. If a vessel is not equipped with a single source of power for emergency lighting, it must have individual battery powered lights that: <input type="checkbox"/> Are connected to an automatic battery charger; and Have sufficient capacity for a minimum of 2 hours of continuous operation	46 CFR 183.432 (a) 46 CFR 183.30 46 CFR 183.432 (b)

Notes:

Task 11: Electrical (Continued)

Step	Action	Ref
11.3 (cont)	<input type="checkbox"/> Ensure all metallic enclosures and frames of electrical equipment are permanently grounded to the hull on a metallic vessel. On a nonmetallic vessel, the enclosures and frames of electrical equipment must be bonded together to a common ground by a normally non-current carrying conductor. Metallic cases of instruments and secondary windings of instrument transformers must be grounded. <input type="checkbox"/> Ensure that on a nonmetallic vessel, where a ground plate is provided for radio equipment, it must be connected to the common ground.	46 CFR 183.372 (a) 46 CFR 183.372 (b)
11.4	<input type="checkbox"/> Inspect radios fused at the main panel (INSPECT RADIO POWER SUPPLY).	46 CFR 183.392
11.5	<input type="checkbox"/> Inspect cable, wiring, receptacles, outlets, and accessories. <input type="checkbox"/> Inspect all cable as far as practicable without undue disturbance of the cable or electrical apparatus <input type="checkbox"/> Test all circuit breakers by manual operation; <input type="checkbox"/> Inspect fuses including ensuring the ratings of fuses are suitable for the service intended;	46 CFR 176.806 (a) 46 CFR 176.806 (b) 46 CFR 176.806 (c)
11.6	<input type="checkbox"/> Inspect lighting fixtures.	46 CFR 183.410 46 CFR 183.30-1

Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.12	<input type="checkbox"/> Inspect rescue boats/rescue platforms. <input type="checkbox"/> Marked with vessel name <input type="checkbox"/> Capacity <input type="checkbox"/> Retro-reflective tape	46 CFR 180.210 46 CFR 185.604 NVIC 1-87 46 CFR 180.10-35
8.13	<input type="checkbox"/> Verify that a CG-approved rescue boat is provided for vessels >65 feet. Exemption: <ul style="list-style-type: none"> • Vessel is sufficiently maneuverable, arranged and equipped to recover a helpless person from the water, and • Recovery can be observed from the operating station, and • Vessel does not routinely engage in operations that limit its maneuverability. 	46 CFR 180.210
8.14	<input type="checkbox"/> Verify that a rescue boat acceptable to the OCMI is carried on vessels ≤ 65 feet that: <input type="checkbox"/> Carry passengers on open or partially enclosed decks <input type="checkbox"/> Are designed, arranged, or engaged in operations that the vessel itself cannot serve as adequate rescue craft	46 CFR 180.210
8.15	<input type="checkbox"/> Ensure rescue boat is: <input type="checkbox"/> Small, lightweight boat, with built-in buoyancy <input type="checkbox"/> Capable of being readily launched <input type="checkbox"/> Easily maneuvered <input type="checkbox"/> Of adequate proportion to take an unconscious person onboard without capsizing	46 CFR 180.210
8.16	<input type="checkbox"/> Ensure any repairs made to rescue boat. Note: <i>If rescue boats are inflatable, ensure repairs are made in accordance with manufacturer's instructions and at a CG-approved servicing facility.</i>	

Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.17	<input type="checkbox"/> Rescue platforms. Note: <i>Vessels that are not required to carry a rescue boat may or may not be required to carry a rescue platform. If the vessel is configured in such a manner as to be able to recover a person from the water without a platform, no platform is required. It will be noted on the COI if the vessel is required to carry a rescue boat or a rescue platform.</i>	46 CFR 180.210
8.18	<input type="checkbox"/> Ensure adequate means are provided for transferring a victim from a rescue boat or platform to the deck of the vessel.	46 CFR 176.808 (g)
8.19	<input type="checkbox"/> Inspect survival craft stowage. Ensure each survival craft is: <input type="checkbox"/> Secured to vessel by a painter with a weak link <input type="checkbox"/> Stowed in a float-free arrangement (hydrostatic release unit needed when tied down) <input type="checkbox"/> Automatically inflates where applicable <input type="checkbox"/> Readily accessible to crew for quick launch <input type="checkbox"/> Fully equipped as required <input type="checkbox"/> Sheltered from breaking seas and fire damage <input type="checkbox"/> Stowed to prevent shifting	46 CFR 180.137 46 CFR 180.130 46 CFR 180.150

Notes:

Task 11: Electrical (Continued)

Step	Action	Ref
11.3	<input type="checkbox"/> Inspect switchboards and distribution panels. <input type="checkbox"/> Ensure location is dry, adequately ventilated, totally enclosed, has drip shield, non-conducting mat or grating, and over current <input type="checkbox"/> Check that if a grounded distribution system is provided, there must be only one connection to ground, regardless of the number of power sources. This ground connection must be at the switchboard or at the common ground plate, which must be accessible	46 CFR 183.330 46 CFR 183.380 46 CFR 183.376 (a)
	<input type="checkbox"/> Ensure each propulsion, power, lighting, or distribution system having a neutral bus or conductor must have the neutral grounded	46 CFR 183.376 (b)
	<input type="checkbox"/> The neutral bus must be permanently connected to the neutral bus on the main switchboard;	46 CFR 183.376 (c)
	<input type="checkbox"/> No switch, circuit breaker, or fuse in the neutral conductor of the bus-tie feeder connecting the emergency switchboard to the main switchboard	
	<input type="checkbox"/> Ensure on a metallic vessel, a grounded alternating current system must be grounded to the hull. On a nonmetallic vessel, the neutral must be connected to the common ground, except that aluminum grounding conductors must not be used.	46 CFR 183.376 (d)

Notes:

Task 11: Electrical

Step	Action	Ref
11.1	<input type="checkbox"/> Inspect independent generators. <ul style="list-style-type: none"> <input type="checkbox"/> Ensure that when a ship service generator driven by a propulsion engine is used as a source of electrical power, a vessel speed change, throttle movement or change in direction of the propeller shaft rotation must not interrupt power to any of the loads specified in paragraph (a)(1) of this section. 	46 CFR 183.310 (b)
11.2	<input type="checkbox"/> Inspect batteries and alternator (if required). <ul style="list-style-type: none"> <input type="checkbox"/> Ensure a vessel with batteries of adequate capacity to supply the loads specified in paragraph (a)(1) of this section for three hours, and a generator or alternator driven by a propulsion engine, complies with the requirement in paragraph (a)(1) of this section. <input type="checkbox"/> Inspect of batteries for condition and security of stowage <input type="checkbox"/> All batteries must be located as high above the bilge as practicable, secured to protect against shifting with the roll and pitch of the vessel, and free from exposure to water splash or spray <input type="checkbox"/> All batteries must be mounted in trays lined with, or constructed of, a material that is resistant to damage by the electrolyte <input type="checkbox"/> Battery charger with ammeter connected to charging circuit 	46 CFR 183.310 (a)(2) 46 CFR 176.806 (f) 46 CFR 183.350 46 CFR 183.350 (d) 46 CFR 183.05-20

Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.20	<input type="checkbox"/> Ensure hydrostatic release units (HRUs) used in float-free arrangements are CG-approved.	46 CFR 160.062

If HRU is	Then they must be...
Non-disposable	<ul style="list-style-type: none"> • Serviced annually. • Installed with body of HRU not making contact with survival craft or any other structure.
Disposable	<ul style="list-style-type: none"> • Not expired. • Installed right side up.

8.21	<input type="checkbox"/> Ensure launching device is provided for any survival craft weighing more than 200 lb that requires lifting more than 1 vertical foot to launch.	NVIC 4-86
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Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.22	<input type="checkbox"/> Ensure stowage of each life float and buoyant apparatus also meets each of the following: <ul style="list-style-type: none"> <input type="checkbox"/> Secured with a CG-approved weak link (160.073) that is of proper strength for the capacity of the survival craft and that is attached at one end to the painter and at the other end to the vessel <input type="checkbox"/> Means to secure weak link to vessel must have a breaking strength at least equal to strength of painter; if synthetic, be dark colored or UV resistant; and if metal, be corrosion resistant <input type="checkbox"/> If painter attachment fitting is not provided, a means to attach the painter must be provided by a wire or line that encircles the device's body; will not slip off; has breaking strength that is at least the breaking strength of the painter; and is dark colored or UV resistant <input type="checkbox"/> If a single painter is used for 2 or more life floats/buoyant apparatus, ensure that: <ul style="list-style-type: none"> • The total weight of the devices does not exceed 400 lb. • Each device is attached to the painter with a line long enough (and of differing lengths) to ensure devices can float without contacting one another and that each device can be launched independently of the other(s). • The strength of the weak link and the breaking strength of the painter (1,500 lb or, for 50 and more persons - 3,000 lb) is determined by the combined capacity of the devices attached to that painter. • If stowed in tiers, ensure tiers are not more than 4' high and that spacers are used between devices. 	46 CFR 180.137 (e)(1) 46 CFR 180.175 (e)(3)(ii) 46 CFR 180.137 (f)

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.43	<input type="checkbox"/> Ensure that a vessel of at least 26 feet in length, has a visual and audible alarm at the operating station to indicate a high water level in each of the normally unmanned spaces <ul style="list-style-type: none"> <input type="checkbox"/> Ensure that a vessel of at least 26 feet in length has been provided with individual bilge lines and bilge suctions for each watertight compartment, the arrangement of the vessel is such that ordinary leakage may be removed from this compartment by the use of a hand portable bilge pump or other equipment, and such equipment is provided. <input type="checkbox"/> Ensure a bilge pipe in a vessel of not more than 65 feet in length must be not less than 1 inch nominal pipe size. <ul style="list-style-type: none"> • A bilge pipe in a vessel of more than 65 feet in length must be not less than 1.5 inches nominal pipe size. • A bilge suction must be fitted with a suitable strainer having an open area not less than three times the area of the bilge pipe. 	46 CFR 182.530 (a) 46 CFR 182.510 (a) 46 CFR 182.25-5(d) 46 CFR 182.510 (b)
10.44	<input type="checkbox"/> Ensure all vital systems piping is appropriate and meet subpart F	46 CFR 182.710 46 CFR 182.40-5

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.40	<input type="checkbox"/> Ensure a drip pan fitted with a flame screen is installed under each gasoline strainer.	46 CFR 182.455 (b)(6)
10.41	<input type="checkbox"/> Ensure no outlets to permit drawing of fuel below deck are present in gasoline fuel lines.	46 CFR 182.455 (b)(8)
10.42	<input type="checkbox"/> Ensure flexible hose used for alcohol-gasoline blend fuels meets the permeability requirements of 33 CFR 183, subpart J (SAE Class 1 or Class 2 hose or USCG A1, A2, B1 or B2 hose).	46 CFR 182.720 (e)(3)(iv) 46 CFR 182.455 (g) 46 CFR 182.20-30 (d)
10.43	<input type="checkbox"/> Operational test of all overboard discharge and intake valves and watertight bulkhead pipe penetration valves;	46 CFR 176.804 (g)
	<input type="checkbox"/> Operational test of the means provided for pumping bilges; and (i) Test of machinery alarms including bilge high level alarms.	46 CFR 176.804 (h)
	<input type="checkbox"/> Ensure vessel has been provided with bilge pumps in accordance with Table 182.520(a).	46 CFR 182.520 (a)
	<input type="checkbox"/> If there is a portable hand bilge pump must be:	
	<input type="checkbox"/> Capable of pumping water, but not necessarily simultaneously, from all watertight compartments; and	46 CFR 182.520 (b)
<input type="checkbox"/> Provided with suitable suction hose capable of reaching the bilge of each watertight compartment and discharging overboard.	46 CFR 182.25-5(d)	

Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.23	Inspect survival craft embarkation arrangements.	46 CFR 185.700 (a)
	<input type="checkbox"/> Ensure a CG-approved launching appliance (160.163) or marine evacuation system (160.175) is provided for each inflatable life raft and IBA when either:	46 CFR 180.150 (a)(1) & (2)
	<input type="checkbox"/> The embarkation station is on a deck more than 15' above the waterline; OR	46 CFR 185.704 (c)
	<input type="checkbox"/> The craft is to be boarding prior to being placed in the water	46 CFR 185.700 (a)
	<input type="checkbox"/> Ensure a CG-approved embarkation ladder (160.017) is provided at every embarkation station whose deck is more than 10' above the waterline.	46 CFR 185.700 (b)
	<input type="checkbox"/> Ensure ladder is in satisfactory condition (lines & steps not excessively worn or rotted, steps securely fitted to lines, etc.) and securely fastened to vessel (attachment points and shackles not wasted)	
<input type="checkbox"/> Ensure deck area in vicinity of ladder is clear of any obstructions that may interfere with boarding or launching of survival craft		

Notes:

Task 8: Lifesaving Equipment (Continued)

Step	Action	Ref
8.24	Inspect launching appliances (davits & winches).	
	<input type="checkbox"/> Ensure structural integrity of any launching appliance (no excess wastage, no fractures, all fasteners tight, etc.).	46 CFR 185.700 (a)
	<input type="checkbox"/> Ensure falls on launching appliances have been renewed at least every 5 years or when deteriorated (excess wear, flat spots, corrosion, broken wires, fishhooks, etc.).	46 CFR 176.808 (a)(1)
	<input type="checkbox"/> Ensure falls have been end for ended at least every 30 months.	46 CFR 185.704 (b)
	<input type="checkbox"/> Ensure date of fall renewal/end for ending is recorded on a corrosion resistant tag affixed to the fall.	46 CFR 185.704 (a)
8.25	<input type="checkbox"/> Conduct operational test of rescue boat (normally done in conjunction with man overboard drill).	46 CFR 185.704 (c)
		46 CFR 176.808 (a)(1) & (g)
		46 CFR 185.520 (d)
		46 CFR 185.720

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.35 (Con't)	<input type="checkbox"/> Ensure all gasoline engines (except outboard engines) are fitted with an acceptable means of backfire flame control as follows:	46 CFR 182.415 (c)
	<input type="checkbox"/> A clean backfire flame arrester complying with, and marked, SAE J-1928 or UL 1111 secured to the air intake with a flametight connection	
	<input type="checkbox"/> An engine air and fuel induction system that provides adequate protection equivalent to a backfire flame arrester	
	<input type="checkbox"/> An arrangement of the carburetor or engine air induction system that will disperse any flames to the atmosphere outside the vessel in a safe manner, or	
	<input type="checkbox"/> An air induction system approved, marked, and tested under 46 CFR 162.043	
10.36	<input type="checkbox"/> Ensure gasoline is stored only in fuel tanks that are independent of the hull.	46 CFR 182.435 (a)
10.37	<input type="checkbox"/> Ensure fill pipes and sounding pipes for gasoline fuel tanks extend to within one-half of their diameter from the bottom of the tank.	46 CFR 182.445 (e)
10.38	<input type="checkbox"/> Ensure valves in gasoline fuel lines are of a suitable nonferrous type.	46 CFR 182.455 (a)(4)
10.39	<input type="checkbox"/> Ensure all gasoline fuel lines are connected at the top of the tank and run at or above the level of the tank top to a point as close as possible to the engine connection (fuel lines may be run below the level of the tank top if fitted with antisiphon protection).	46 CFR 182.455 (b)(1)

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.35	<input type="checkbox"/> Inspect the following on vessels equipped with GASOLINE-powered internal combustion engines ONLY:	46 CFR 182.410 (a)
	<input type="checkbox"/> Ensure electrical equipment in spaces containing machinery powered by and fuel tanks for gasoline are explosion-proof, intrinsically safe, or ignition protected for use in a gasoline atmosphere.	46 CFR 182.410 (c) 46 CFR 182.480 (a)
	<input type="checkbox"/> Ensure enclosed spaces containing machinery powered by gasoline are equipped with a flammable vapor detection system.	
	<input type="checkbox"/> Ensure flammable vapor detection system meets UL Standard 1110 "Marine Combustible Gas Indicators"	46 CFR 182.480 (c)
	<input type="checkbox"/> Ensure system is operational for at least 30 seconds prior to engine startup and continues sensing the entire engine is running	46 CFR 182.480 (d)
	<input type="checkbox"/> Ensure system provides a visual and audible alarm at the operating station	46 CFR 182.480 (e)
	<input type="checkbox"/> Ensure a system sensor is located in the lowest part of a machinery space and a fuel tank space above expected bilge water levels	46 CFR 182.480 (b)&(h)
	<input type="checkbox"/> Ensure that system operating instructions are posted at the operating station and that the system's operations and maintenance manual is onboard	46 CFR 182.415 (a)
	<input type="checkbox"/> Ensure all carburetors (except downdraft types) are equipped with an integral or externally fitted drip collector of adequate capacity.	

Notes:

Task 9: Fire Protection Systems

Step	Action	Ref
9.1	<input type="checkbox"/> Verify fire detection system is installed in the required spaces.	46 CFR 181.400
	<input type="checkbox"/> Propulsion machinery space	
	<input type="checkbox"/> A space containing an internal combustion engine of more than 50 hp	
	<input type="checkbox"/> Space containing an oil-fired boiler	
	<input type="checkbox"/> Space containing machinery powered by gasoline or other fuel with a flash point of 110°F or lower	
	<input type="checkbox"/> Space containing a fuel tank for gasoline or other fuel with a flash point of 110°F or lower	
	<input type="checkbox"/> A paint locker	
	<input type="checkbox"/> A storeroom containing flammable liquids (including liquors of 80 proof or more, packed in individual containers of 2.5 gal or more)	46 CFR 181.400 (a)(8) 46 CFR 181.400 (f)
	<input type="checkbox"/> An enclosed vehicle space	
9.2	<input type="checkbox"/> Verify fire detection has been serviced or tested annually.	46 CFR 176.810 (a)(7)
9.3	<input type="checkbox"/> Verify smoke detection systems are installed in the required areas (overnight passenger accommodation spaces).	46 CFR 181.400 (e) 46 CFR 181.400 (c)
	<input type="checkbox"/> Properly installed	46 CFR 76.27
9.4	<input type="checkbox"/> Verify proper operation of fire and smoke detectors.	46 CFR 176.810(a)(7) 46 CFR 181.450

Notes:

Task 9: Fire Protection Systems (Continued)

Step	Action	Ref
9.5	<input type="checkbox"/> Inspect fixed gas fire extinguishing systems.	46 CFR 176.810
	<input type="checkbox"/> Complete operating instructions	46 CFR 185.612
	<input type="checkbox"/> Verify cylinders are weighted	NVIC 6-72 CH 1
	<input type="checkbox"/> Verify cylinders are hydro-tested	NVIC 3-95
	<input type="checkbox"/> Testing or renewal of flexible connections/hoses (47 CFR 147.65)	46 CFR 176.180 (a)(5)
	<input type="checkbox"/> Must have manual ventilation closures on protected space	46 CFR 182.15-45
	<input type="checkbox"/> Controls and valves must be located outside the protected space	46 CFR 182.20-45
	<input type="checkbox"/> Must have local manual controls at the storage cylinders	46 CFR 181.410
	<input type="checkbox"/> Must have remotes in a break glass enclosure	46 CFR 182.465 (h)
	<input type="checkbox"/> Piping	46 CFR 181.20-35
	• Pre-engineered –	
	• automatic shut down for power ventilation	46 CFR 181.410 (b)
	• properly installed as per manufacture instruction	
	• light to indicate discharge	46 CFR 181.410 (d)
	• audio alarm	
	• means to reset	
	• only one pre-engineered system per protected space	46 CFR 181.420 46 CFR 181.20

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.29	<input type="checkbox"/> Ensure a loop of copper tubing or flexible hose is installed in the fuel supply line where it connects to the engine.	46 CFR 182.455 (b)(5)
10.30	<input type="checkbox"/> Ensure that a suitable metal marine type strainer is fitted in the fuel supply line in the engine compartment and meets the following: <ul style="list-style-type: none"> <input type="checkbox"/> Is leak free; and <input type="checkbox"/> Fuel filters fitted with bowls of other than steel construction (such as Raycor filter with clear bowls) must be approved by COMDT, be protected from mechanical damage, and be fitted with a flame shield if specified when approved by COMDT. 	46 CFR 182.455 (b)(6) 46 CFR 182.20-40(b)(5) 46 CFR 182.15-40(b)(5)
10.31	<input type="checkbox"/> Ensure any accessory installed in the fuel line is independently supported.	46 CFR 182.455 (b)(7)
10.32	<input type="checkbox"/> Ensure any valves for removing water or impurities from diesel fuel water traps or strainers are fitted with caps or plugs.	46 CFR 182.455 (b)(9)
10.33	<input type="checkbox"/> Ensure portable fuel tanks are not used except when used for portable dewatering pumps and outboard engines.	46 CFR 182.458 (a)
10.34	<input type="checkbox"/> Ensure portable fuel tanks and any related fuel lines and accessories meet ABYC H-25 standards.	46 CFR 182.458 (b)

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.26	<input type="checkbox"/> Ensure no cock-type valves are in fuel lines except for the solid bottom type.	46 CFR 182.455 (b)(3) 46 CFR 182.15-40(a)(5) 46 CFR 182.20-40(a)(4)
10.27	<input type="checkbox"/> Ensure all fuel lines are accessible for inspection, protected from mechanical injury, and secured against excessive movement and vibration. <input type="checkbox"/> Ensure fuel line securing straps are of soft, nonferrous metal which have no sharp edges and are insulated to protect against corrosion <input type="checkbox"/> Ensure fuel lines passing through bulkheads are protected from damage by close fitting ferrules or stuffing boxes	46 CFR 182.455 (b)(3)
10.28	<input type="checkbox"/> Ensure manually operated shutoff valves are installed in the fuel supply lines at the fuel tank connection and the engine end of the fuel line. <input type="checkbox"/> Ensure that the shutoff valve at the fuel tank connection (also known as the emergency fuel shutoff valve) can be manually operated from outside the compartment in which the valve is located. <input type="checkbox"/> If the handle of the emergency fuel shutoff valve is located inside the machinery space, it must be located so operator does not have to reach more than 12 inches into space and must be shielded from flames. <input type="checkbox"/> Ensure electric solenoid shutoff valves are used only if used in addition to the manual valves. <input type="checkbox"/> Ensure remote fuel shutoff stations are marked indicating direction of turn	46 CFR 182.455 (b)(4) 46 CFR 182.15-40(b)(3) 46 CFR 182.20-40(b)(3) 46 CFR 185.608 46 CFR 185.30-20

Notes:

Task 9: Fire Protection Systems (Continued)

Step	Action	Ref
9.6	<input type="checkbox"/> Verify fixed gas fire extinguishing system has been serviced or tested annually.	46 CFR 176.810 (b)(2)
9.7	<input type="checkbox"/> Portable and semiportable fire extinguishers <input type="checkbox"/> Annual service IAW NFPA 10 <input type="checkbox"/> Cylinders hydrotested <input type="checkbox"/> Testing or renewal of flexible connections/hoses (47 CFR 147.65) <input type="checkbox"/> Required number and location	46 CFR 176.810 NVIC 6-72 CH 1 46 CFR 176.180 (a)(5) 46 CFR 181.500
9.8	<input type="checkbox"/> Inspect fire main and hydrants.	46 CFR 181.310 46 CFR 181.15
9.9	<input type="checkbox"/> Inspect fire axes.	46 CFR 181.600 46 CFR 181.15-10
9.10	<input type="checkbox"/> Inspect fire buckets of 2.5 gals (if power fire pump not required).	46 CFR 181.610
9.12	<input type="checkbox"/> Inspect fire pump.	46 CFR 181.300 46 CFR 181.10

Notes:

Task 9: Fire Protection Systems (Continued)

Step	Action	Ref
9.13	<input type="checkbox"/> Test pump (all vessels) <input type="checkbox"/> Vessel < 65ft & > 49 passengers & vessels > 65ft <input type="checkbox"/> No excessive leaking <input type="checkbox"/> Manual priming not required <input type="checkbox"/> Pump is operable from main operating station and locally at the pump. <input type="checkbox"/> Meets required capacity 50 gpm and pressure of 60psi <input type="checkbox"/> Pump must have a pressure gauge	46 CFR 181.300
9.13	<input type="checkbox"/> Inspect fire hoses and nozzles. <input type="checkbox"/> Vessel < 65ft & > 49 passengers & vessels > 65ft <input type="checkbox"/> Commercial lined fire hose (UL 19) <input type="checkbox"/> 1.5 inches in diameter & 50 ft in length <input type="checkbox"/> Fittings of brass or other suitable material (NFPA) <input type="checkbox"/> Nozzle must be approved under 46 CFR 162.027 or type recognized by Commandant. <input type="checkbox"/> Vessel < 65ft & < 49 passengers <input type="checkbox"/> May have a garden type hose > .0625 inches in diameter and >25 ft but < 50 ft <input type="checkbox"/> Fittings must be corrosion resistant material <input type="checkbox"/> Nozzle must be corrosion resistant and be able to switch from stream to spray.	46 CFR 181.320

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.25	Inspect fuel piping as follows: <input type="checkbox"/> Ensure fuel lines are of one of the following materials: <input type="checkbox"/> Annealed tubing of copper, copper-nickel, or nickel-copper having wall thickness of at least 0.035 inches; or <input type="checkbox"/> For diesel fuels, piping which provides equivalent safety such as seamless steel pipe or tubing may be used; or <input type="checkbox"/> For diesels fuels on aluminum hulled vessels, aluminum piping of at least schedule 80 may be used.	46 CFR 182.455 (a)(1) 46 CFR 182.455 (a)(1)(iii)
	<input type="checkbox"/> Flexible hose meets the following requirements: <input type="checkbox"/> Hose meets SAE J-1942 standards and has end fittings that comply with SAE J-1475 standards which have been installed IAW the manufacturer's instructions. <input type="checkbox"/> Hose runs are visible, easily accessible, protected from mechanical damage, and do not penetrate watertight decks or bulkheads <input type="checkbox"/> Hose used only for the purpose of flexibility in lengths ≤ 30 inches and subject to pressures ≤ 5 psig (normally used to connect metallic fuel pipe runs to the engine to eliminate effects of engine vibration) may meet the following requirements: <input type="checkbox"/> Suitable compression-type connection fittings may be used or hose may be installed with two hose clamps at each end of the hose; and <input type="checkbox"/> USCG Type A1, A2, B1, or B2 may be accepted instead of hose meeting SAE Standard J-1942	46 CFR 182.720 (e) 46 CFR 182.40 46 CFR 182.720 (e)(1) 46 CFR 182.720 (e)(3) 46 CFR 182.720 (e)(3)(v)

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.22	<input type="checkbox"/> Ensure discharge ends of vent pipes terminate outside of vessel, either on the hull exterior or in U-bends as high above the weather deck as possible. <input type="checkbox"/> Ensure discharge ends of vent pipes are fitted with a flame screen or flame arrester of such design and size as to not reduce the net cross sectional diameter of the vent pipe and to permit cleaning or renewal (flame screens must consist of a single screen of corrosion resistant wire of at least 30 x 30 mesh).	46 CFR 182.450 (e)
10.23	<input type="checkbox"/> Verify when flexible hose is used in the vent pipe: <input type="checkbox"/> Hose has high resistance to salt water, petroleum oils, heat, and vibration. <input type="checkbox"/> Hose overlaps metal pipe ends at least 1-½ times the pipe diameter and is secured with 2 hose clamps.	46 CFR 182.450 (g)
10.24	<input type="checkbox"/> Vent pipes are installed with an upward gradient in a manner to prevent fuel from being trapped in the line.	46 CFR 182.450 (h)

Notes:

Task 9: Fire Protection Systems (Continued)

Step	Action	Ref
9.14	<input type="checkbox"/> Test fire hoses using installed fire pump. <input type="checkbox"/> Piping <input type="checkbox"/> Valves <input type="checkbox"/> Fittings	46 CFR 176.810 46 CFR 181.310 46 CFR 181.320
9.15	<input type="checkbox"/> Inspect structural fire protection. <input type="checkbox"/> Noncombustible trim <input type="checkbox"/> Fire-resistant furnishing	46 CFR 177.405 46 CFR 177.410
9.16	<input type="checkbox"/> Inspect paint lockers. <input type="checkbox"/> Constructed of steel or equivalent material <input type="checkbox"/> Protected by fire extinguishing system	46 CFR 177.405
9.17	<input type="checkbox"/> Inspect emergency outfits and equipment (SOLAS only). <input type="checkbox"/> Vessel provided with required number of outfits <input type="checkbox"/> Spare charges for breathing apparatus are provided <input type="checkbox"/> Storage locations are easily accessible, permanently and clearly marked, and separated as wide as practicable.	SOLAS II-2/10

Notes:

Task 9: Fire Protection Systems (Continued)

Step	Action	Ref
9.18	<input type="checkbox"/> Verify fire control plan (SOLAS only). <ul style="list-style-type: none"> <input type="checkbox"/> Vessels on an international route must have general arrangement plans permanently exhibited with details of decks, divisions, fire fighting equipment <input type="checkbox"/> Fire control plan must be in language required by administration and translated into English or French. <input type="checkbox"/> Duplicate set of plans shall be provided in a prominent weather tight container outside deckhouse for aid of shore side firefighting personnel. 	SOLAS II-2/15/3

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.17	<input type="checkbox"/> Ensure all fuel tanks are electrically bonded to a common ground.	46 CFR 182.440 (b)(4) 46 CFR 182.15-25(b)(4)
10.18	<input type="checkbox"/> Ensure there is a means to accurately determine the amount of fuel in each tank.	46 CFR 182.445 (b)
10.19	<input type="checkbox"/> Ensure fill pipes and sounding pipes are so arranged that overflow of liquid or vapor cannot escape to the inside of the vessel.	46 CFR 182.445 (d)
10.20	<input type="checkbox"/> Ensure all fuel tank fill pipes and sounding pipes are suitably marked.	46 CFR 182.445 (e)
10.21	<input type="checkbox"/> Each fuel tank is fitted with a vent pipe connected to its highest point (tanks without a vent line must be inspected as a pressure vessel). <ul style="list-style-type: none"> <input type="checkbox"/> Ensure net cross sectional area of vent pipes are at least: <ul style="list-style-type: none"> <input type="checkbox"/> .625 inches if fill pipe terminates at top of the tank; <input type="checkbox"/> .75 inches if fill pipe extends into tank; or <input type="checkbox"/> The cross sectional area of the fill pipe if the tank is filled under pressure. <input type="checkbox"/> Ensure tank space is properly vented <ul style="list-style-type: none"> <input type="checkbox"/> >500 cubic feet = gooseneck >2.5 inches <input type="checkbox"/> <500 cubic fee = gooseneck >1.5 inches 	46 CFR 182.440 (c)(3) 46 CFR 182.450 (b)&(c) 46 CFR 182.450 (d) 46 CFR 182.450 (e) 46 CFR 182.15-35 46 CFR 182.460 46 CFR 182.470 46 CFR 182.15-45 46 CFR 182.20-50

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.16	<input type="checkbox"/> Ensure independent fuel tank(s) has not been replaced with a different sized tank or relocated since last inspection (change in center of gravity and weight may adversely affect stability).	46 CFR 176.702 46 CFR 176.402 (d)(3) & (4)
	<input type="checkbox"/> Ensure fuel tank(s) is free of excessive corrosion, that no fittings are leaking, that independent fuel tanks are properly secured in place to prevent movement, and that tank is insulated from braces and supports by a nonabrasive and nonabsorbent material.	46 CFR 176.804 (d) 46 CFR 182.440 (b)(3) 46 CFR 176.804 (c)(1)
	<input type="checkbox"/> When the structural integrity of a fuel tank is in question, ensure the tank is replaced or, as an alternative, witness a satisfactory hydrostatic (use liquid only, not air) pressure test of the tank to 5 psig or 1-½ times the max pressure head the tank may be subjected to, whichever is greater.	

Notes:

Task 10: Machinery and Auxiliary Machinery

Step	Action	Ref
10.1	Inspect propulsion machinery.	
	<input type="checkbox"/> Ensure propulsion machinery is suitable and capable of operating at constant marine loads	46 CFR 182.200 (a)
	<input type="checkbox"/> Ensure propulsion machinery has not been changed out since last inspection (change in center of gravity and weight may adversely affect stability).	46 CFR 176.702 46 CFR 176.402 (d)(3) & (4)
	<input type="checkbox"/> Ensure all engines have at least two means for stopping the engine(s), one of which may be the shutoff valves required in fuel lines.	46 CFR 182.200 (b) 46 CFR 184.620 (a)
	<input type="checkbox"/> Ensure there is a reliable means of shutting down a propulsion engine at the main pilothouse control station.	46 CFR 175.10-29
	<input type="checkbox"/> Ensure machinery guards are installed over exposed gears, belts or other rotating machinery	46 CFR 184.620 (b) 46 CFR 177.960 46 CFR 177.35-15
10.2	Inspect internal combustion engines (diesel and gasoline powered).	
	<input type="checkbox"/> Ensure all starting motors, generators, and spark-producing devices are mounted as high above bilges as practicable	46 CFR 182.410 (a)
	<input type="checkbox"/> Ensure gauges for rpm, jacket water discharge temperature, and lubricating oil pressure are provided and are readily visible at the operating station (rpm gauge not required for existing vessels)	46 CFR 182.410 (b) 46 CFR 182.15-5 46 CFR 182.20-5
	<input type="checkbox"/> Ensure all flexible hoses are clamped at each end with two corrosion-resistant metal hose clamps where practicable (a single clamp is allowed when pipe end is expanded or beaded)	46 CFR 182.410 (d) 46 CFR 182.720
	<input type="checkbox"/> Hose meets SAE J-1942 standards and has end fittings that comply with SAE J-1475 standards which have been installed IAW the manufacturer's instructions.	

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.3	<input type="checkbox"/> Inspect engine cooling system as follows:	
	<input type="checkbox"/> Ensure the engine head, block, and exhaust manifold are cooled by water from a pump that operates whenever the engine operates.	46 CFR 182.420 (a)(1)
	<input type="checkbox"/> Ensure a suitable strainer is installed on the raw water intake line of the cooling system.	46 CFR 182.420 (a)(2)
	<input type="checkbox"/> On vessels ≤ 65 ft and carrying ≤ 12 passengers, a propulsion or auxiliary gasoline engine may be air cooled if in compliance with ABYC P-4.	46 CFR 182.420 (c)&(d)
	<input type="checkbox"/> An auxiliary gasoline engine may be air cooled if it is installed on an open deck and has a self-contained fuel system.	46 CFR 182.420 (d)(1)
	<input type="checkbox"/> A diesel engine may be air cooled or employ an air cooled jacket water radiator when sufficient ventilation is available, or is installed on vessels ≤ 65 ft and carrying ≤ 12 passengers and is in compliance with ABYC P-4.	46 CFR 182.420 (e) 46 CFR 182.465 (b)
10.4	<input type="checkbox"/> Ensure keel coolers are provided with a shutoff valve where the cooler penetrates the hull (not required for integral keel coolers).	46 CFR 182.422 (b)
	<input type="checkbox"/> Ensure all piping outboard of the shutoff valves is at least Schedule 80 and that any flexible hoses used at the machinery connections is approved hose and double hose clamped	46 CFR 182.422 (c)&(d)
	<input type="checkbox"/> Ensure all integral keel coolers are fabricated with material of the same thickness and quality of the hull using full penetration welds and with a slope at each end not greater than 4 to 1.	46 CFR 182.422 (e)

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.15	<input type="checkbox"/> Conduct tests & inspections of UNFIRED pressure vessels IAW 46 CFR 61.10.	46 CFR 176.812 46 CFR 182.15-25(b)(4)
	<input type="checkbox"/> Complete external and internal visual inspection at least every 5 years, except:	46 CFR 61.10-5 (b)
	<input type="checkbox"/> Internal inspection is not required on Class I and II pressure vessels (see 46 CFR table 54.01-5(b)) with a volume of <5 cu ft which do not contain hazardous materials and are stamped with either the ASME "U" or "UM" symbols	46 CFR 54.01-5 (c)(3) 46 CFR 61.10-5 (b) (3)
	<input type="checkbox"/> Complete hydrostatic test (water, not air) if visual inspection reveals defect which may effect safety of pressure vessel. Test pressure shall be 1-1/2 times the vessel's MAWP	46 CFR 61.10-5 (i)
	<input type="checkbox"/> Complete check of safety or relief valves settings at least twice in 5 years and not more than every 3 years	46 CFR 54.15-10 (a)
	<input type="checkbox"/> Ensure safety or relief valve setting does not exceed the pressure vessel's MAWP and that valve does not relieve at a pressure greater than the vessel's MAWP	46 CFR 54.15-10 (g)
	<input type="checkbox"/> Ensure safety or relief valve relieves at a pressure not more than 10% above or below the valve's marked pressure	

Service	Working Pressure	Relief Valve Setting	Date Tested or Examined

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.11	<input type="checkbox"/> Inspect auxiliary machinery.	
	<input type="checkbox"/> Ensure heating boilers are tested or examined every 3 years	46 CFR 182.310
	<input type="checkbox"/> Ensure water heaters comply with 46 CFR Parts 53 & 63 except:	
	<input type="checkbox"/> Electric water heaters rated at not more than 100 psi and 250°F are acceptable if:	46 CFR 182.310 (c)
	<input type="checkbox"/> Capacity ≤ 120 gallons;	46 CFR 182.320 (a) & (b)
10.12	<input type="checkbox"/> Heat input ≤ 200,000 Btu per hour;	
	<input type="checkbox"/> UL listed (UL 174 or UL 1453); AND	
	<input type="checkbox"/> Protected by pressure-temperature relief device	46 CFR 182.320 (a)
10.12	<input type="checkbox"/> Ensure water heaters are installed and secured from rolling and movement.	46 CFR 182.320 (c)
10.13	Inspect boilers.	46 CFR 182.310(c)
	<input type="checkbox"/> Ensure machinery of steam or gas turbine type, auxiliary boilers, and heating boilers comply with subchapter F (Marine Engineering)	MSM Vol. II B1-G
	<input type="checkbox"/> Verify boilers including associated piping and fittings meet applicable requirements of subchapter "F".	NVIC 11-92
	<input type="checkbox"/> Inspect boiler safety valves.	46 CFR 61.15-5
	<input type="checkbox"/> Ensure no flex hose is used from the F/O pump to the burner.	NVIC 1-71
	<input type="checkbox"/> Test boilers	46 CFR 61.05-10G
10.14	<input type="checkbox"/> Ensure unfired pressure vessels comply with subchapter F (Marine Engineering).	46 CFR 61.05-10

Notes: _____

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.5	<input type="checkbox"/> Inspect engine exhaust systems as follows (as an alternative, vessels may instead comply with ABYC P-1):	46 CFR 182.425 (c)
	<input type="checkbox"/> Ensure dry exhaust pipes are clear of and suitably insulated from combustible materials and suitably insulated to prevent injuries.	46 CFR 182.430 (k)
	<input type="checkbox"/> Ensure dry exhaust pipes installed on wood and FRP boats are installed IAW ABYC P-1 (designed to arrest sparks; metallic connections are flanged, threaded, or welded; and flexible sections are seamless stainless steel).	46 CFR 182.425 (a)(1) & (2)(v)
10.6	<input type="checkbox"/> Ensure dry exhaust pipes installed on wood and FRP boats are installed IAW ABYC P-1 (designed to arrest sparks; metallic connections are flanged, threaded, or welded; and flexible sections are seamless stainless steel).	46 CFR 177.405 (b)
	<input type="checkbox"/> Ensure horizontal dry exhaust pipes:	
	<input type="checkbox"/> Do not pass through living or berthing spaces.	46 CFR 182.425 (a)(2)
	<input type="checkbox"/> Terminate above the deepest load waterline.	
	<input type="checkbox"/> Are arranged to prevent entry of cold water from rough or boarding seas (i.e., flaps installed over exhaust outlet).	
	<input type="checkbox"/> Are constructed of corrosion-resisting material at the hull penetration.	

Notes: _____

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.7	<input type="checkbox"/> Ensure that exhaust pipe systems cooled by water are: <ul style="list-style-type: none"> <input type="checkbox"/> Provided with cooling water obtained from the engine cooling system or from a separate engine driven pump. 46 CFR 182.425 (b)(1) <input type="checkbox"/> Fitted so that cooling water is injected into the exhaust system as close as possible to the engine exhaust manifold and so that water passes through the entire length of the exhaust pipe. 46 CFR 182.425 (b)(2) <input type="checkbox"/> Fitted with insulation or be water-jacketed between the exhaust manifold and the point of cooling water injection. 46 CFR 182.425 (b)(3) <input type="checkbox"/> Either water-jacketed or insulated, if a vertical exhaust pipe, to ensure no water is mixed with exhaust gases. 46 CFR 182.425 (b)(4) <input type="checkbox"/> Provided with a suitable warning device, visual or audible, installed at the operating station to indicate any reduction in water flow when the cooling water is provided from a source other than the engine cooling water system. 46 CFR 182.425 (b)(6) <input type="checkbox"/> Provided with a suitable strainer in the intake line. 46 CFR 182.430 (b) 	
10.8	<input type="checkbox"/> Ensure there are two independent means to control speed and direction of rotation for each propulsion engine (not required for vessels with multiple propulsion engines with independent control for each engine).	46 CFR 184.620 (a)

Notes:

Task 10: Machinery and Auxiliary Machinery (Continued)

Step	Action	Ref
10.09	<input type="checkbox"/> Ensure there is a fixed means of two-way communications from the operating station to the location of the means to control the engine (not required for multi-engine vessels with pilothouse controls for each engine). <ul style="list-style-type: none"> <input type="checkbox"/> Two-way communications may be satisfied with handheld portable radios or, if locations are sufficiently close together, with direct voice communications (test while underway at full power). 46 CFR 184.602 (a) 	46 CFR 184.602 (a) & (e)
10.10	<input type="checkbox"/> Ensure machinery and boilers for steam and electrically propelled vessels comply with subchapter F (Marine Engineering) and subchapter J (Electrical Engineering).	46 CFR 182.220 (b)

Notes:
