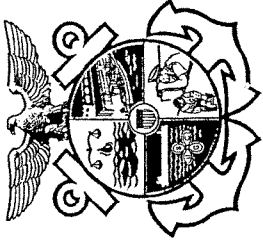


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# T-Boat Reinspection Book

Date: October 5, 2004

Fifteen (15) pages total including this cover



T-BOAT  
REINSPECTION BOOK

Total Time Spent Per Activity:

Regular Personnel (Active Duty)		
ACTIVITY TYPE	ACTIVITY	TRAINING (PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS
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Reserve Personnel		
ACTIVITY TYPE	ACTIVITY	TRAINING (PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS
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Auxiliary Resources	
TOTAL BOAT HOURS	TOTAL AIRCRAFT HOURS

Name of Vessel <b>EXPRESS SHUTTLE II</b>	
Official Number <b>185 3146</b>	
Date Completed <b>05 OCT 04</b>	Location <b>NEW PORT RICHEY</b>
SOLAS Certificates Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Route <input type="checkbox"/> Oceans <input checked="" 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 <b><del>2212979</del> 199 6809</b> <b>4TH</b> <input checked="" type="checkbox"/> Reinspection <input type="checkbox"/> Drydock Inspection	
Streamlined Inspection Program (SIP) Participant <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Inspectors <b>1. CWO3 LAWRENCE 2. CWO3 KIRSCH</b>	

CG-840 TR  
Rev. 5/01

*Handwritten signatures and initials*

**Table of Contents:**

**Section 1: Administrative Items**  
 Involved Parties & General Information ..... 1  
 Vessel Information ..... 2

**Section 2: Certificates and Documents**  
 Certificates ..... 3  
 Manning Certification ..... 3  
 Logs and Manuals ..... 3

**Section 3: Inspection Items**  
 Navigation Safety ..... 4  
 Structural Integrity ..... 5  
 General Health and Safety ..... 6  
 Ground Tackle ..... 6  
 Lifesaving Equipment ..... 6  
 Fire Protection ..... 9  
 Machinery ..... 11  
 Electrical Equipment ..... 13  
 Pollution Prevention ..... 14

**Section 4: Drills**  
 Fire Drill ..... 14  
 Abandon Ship Drill ..... 15  
 Man Overboard Drill ..... 15

**Section 5: Drydock Inspection Items**  
 Hull Structural Integrity ..... 16  
 Watertight Integrity ..... 17  
 Rudders, Propellers, and Tailshafts ..... 18  
 Valves and Through-Hull Fittings ..... 19  
 Ground Tackle ..... 19

**Section 6: Special Drydock Extension Underwater Survey**  
 Review of Application for Underwater Survey ..... 20  
 Underwater Survey ..... 21

**Section 7: Appendices**  
 Notes ..... 22  
 Conversions ..... 25  
 Hours ..... 26

**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	bb/LT	m <sup>3</sup> /ft	bb/m <sup>3</sup>
Freshwater	6.40	1.00	6.29
Saltwater	6.24	.975	6.13
Heavy Oil	6.77	1.06	6.66
DFM	6.60	1.19	7.48
Lube Oil	7.66	1.20	7.54
Weight			
1 Long Ton	= 2240 lbs	1 Metric Ton	= 2204 lbs
1 Short Ton	= 2000 lbs	1 Cubic Foot	= 7.48 gal
1 Barrel (oil)	= 5.61 ft = 42 gal = 6.29 m <sup>3</sup>	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
32	= 0	90	= 32.2
40	= 4.4	100	= 37.8
50	= 10.0	110	= 43.3
60	= 15.6	120	= 48.9
70	= 21.1	150	= 65.6
Pressure: Bars = Pounds per square inch			
1 Bar	= 14.5 psi	5 Bars	= 72.5 psi
2 bars	= 29.0 psi	6 Bars	= 87.0 psi
3 Bars	= 43.5 psi	7 Bars	= 101.5 psi
4 Bars	= 58.0 psi	8 Bars	= 116.0 psi
9 Bars	= 130.5 psi		
10 Bars	= 145.0 psi		







### Section 3: Inspection Items

#### Navigation Safety:

- Charts  
Current and corrected (large enough scale to navigate safely) 46 CFR 184.420
- Test Navigation Lights 46 CFR 183.420  
33 CFR Part 84  
72 COLREGS
- Radar 46 CFR 184.404
- Magnetic compass (oceans/cstw/limited cstw) 46 CFR 184.402
- Illuminated (unless daytime ops only)
- Signaling devices (sound) 33 CFR Part 86
- Whistle/ horn tested
- Signaling devices (distress)
- Flares and day smokes (correct number and expiration) 46 CFR 180.68
- Stowed in brightly colored, portable watertight container
- Marked "Distress Signals" 46 CFR 185.614
- Substitutions with proper expiration date

IF vessel travels:	THEN it must carry:
Oceans / coastwise / limited coastwise / Great Lakes route	6 red hand flares and 6 orange day smokes
Lakes, bays, sounds / rivers route	3 red hand flares and 3 orange day smokes

- Pilothouse control of propulsion engine 46 CFR 184.620
- systems
- Test Radios 47 CFR 80.905
- Electronic position fixing device (vessels on oceans route only) 46 CFR 184.410
- EPIRB (406 MHz) tested 46 CFR 185.728  
(46 CFR 180.15(g))  
46 CFR 180.64
- Float-free arrangement
- Battery expiration date
- HRU / Hydro expiration date
- NOAA registered
- Tests logged
- Marked with vessel name 46 CFR 185.604(c)

- Preparatory meeting
- Duration of underwater survey \_\_\_\_\_
- Site selection
  - Sufficient water depth
  - Underwater hazards
  - "Clear box"
- Plans or drawings
  - Shell openings
  - Docking plugs
  - Bilge keels
  - Welded seams and butts
  - Appendages
  - Anodes
  - Rudder
  - Propeller
  - Reference points
  - Watertight and oiltight bulkheads

#### Underwater Survey:

- Preliminary examination
  - Third party
  - Divers
- Underwater hull exam
  - Third party supervised
  - Ultrasonic gaugings
- On-site survey

Notes:

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## Section 6: Special Drydock Extension Underwater Survey

NOTE: Drydock extensions of up to 30 months are available to steel or aluminum T-boats that operate on certain low-risk routes in fresh water. Guidance for conducting these surveys is found in G-MOC policy letter 3-98.

WARNING: ALL passengers must be removed from vessel prior to removal of sea valves.

### Review of Application for Underwater Survey:

- Submitted 90 days before survey date
- Identify diving contractor
  - Number of divers
  - Type of diving equipment
  - NDT and repair capabilities
- Copy of diving operations manual
  - Means of waterborne diver support
- Means of taking rudder bearing clearances
- Sea chest blanks
- Letter from master / chief engineer / person-in-charge
- Diving personnel / equipment
  - NDT qualifications
  - Repair qualifications
  - Video / audio equipment
  - Coast Guard and OSHA safety regulations
- Hull preparation
  - Cleaning method \_\_\_\_\_
  - Hull openings permanently marked
- Hull Maintenance and Condition Assessment Program
  - Preventative maintenance plan
  - Annual hull condition assessment

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Public address system tested  
 (also required on existing vessels by 11 MAR 01)

46 CFR 184.610

IF vessel is:	AND carries:	THEN vessel must have:
> 65 feet	→	Fixed installation
≤ 65 feet	> 49 passengers	Battery bullhorn
≤ 65 feet	≤ 49 passengers	None required

### Structural Integrity:

#### External hull structure

- Decks
- Shell
- Bulkheads
- Strength members
- Visible damage
- Obvious repairs, modifications, or alterations
- Rails / guards

46 CFR 176.802

#### Internal compartment structures

- Dry
- Visible damage
- Obvious repairs, modifications, or alterations
- Means of escape
- Ceilings
- Inspection ports / ventilation
- Rails / guards

46 CFR 176.802

#### Watertight integrity


- Subdivision watertight bulkheads
- Watertight doors / hatches
  - Operable from both sides
  - Captive devices attached to all unhinged covers
- Coamings (6 inches-exposed routes; 3 inches-protected routes)
- Knife edges
- Gaskets
- Hardware
- Closure means for openings in hull (local and remote)

46 CFR 176.802

46 CFR 179.360

46 CFR 171.124




 Scuppers / freeing ports

46 CFR 171.145  
46 CFR 171.150

 Dead light covers on port lights below main deck


46 CFR 171.117  
46 CFR 179.350

 Deck rail


46 CFR 177.900

- Height requirements (39.5 inches minimum)
- Point load requirements (200 pounds minimum)

**General Health and Safety:**

 General alarm tested


46 CFR 183.550

 Means of escape

46 CFR 177.500

- Operable from both sides
- Marked "Emergency Exit, Keep Clear"


46 CFR 185.606

 Passenger Safety Orientation

46 CFR 185.506


- Public announcement
- Card or pamphlet

**Ground Tackle:**


 Proper ground tackle

46 CFR 184.300  
(46 CFR 184.10-1)


**Life-saving Equipment:**

 Stowage of survival craft

46 CFR 180.130  
46 CFR 180.137

 Embarkation aids

46 CFR 180.150

 Number and type of survival craft

46 CFR 180.200

Item	Number	Capacity (Persons)
L/F	4	22EA (88TOTAL)

**Valves and Through-Hull Fittings:**

NOTE: Guidance on valves and through-hull fittings can be found in MSM Volume II, Chapter 8.F.

Sea chests, spool pieces, through-hull fittings 46 CFR 176.610

- Strainers removed
- Welds
- Strainer fastenings
- Fastenings
- Branch connections

Sea valves 46 CFR 176.610

- Fitted where required
- Opened for examination
- Body
- Guides
- Threads
- Seat
- Stems
- Discs
- Plug cocks
- Holding down bolts
- Closure tested (local and/or remote)

**Ground Tackle:**

Proper ground tackle

46 CFR 184.300  
(46 CFR 184.10-1)

- Anchors
- Cables

Notes:

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Airports below weatherdecks

- Dogs or other securing appliances
- Rims or seats
- Glass
- Dead covers
- Hinges and lugs

Self-bailers and cockpit freeing ports

- Check valves
- Required area

Compartment or inner bottom drains (drydocking drains)

- Secure plugs

Draft marks and load lines

- Proper locations
- Legibly inscribed
- Proper spacing and size
- Load line markings verified (vessels ≥ 79 feet)

**Rudders, Propellers, and Tailshafts:**

Rudder(s)

- Skeg
- Stock
- Fastenings
- Bushings

Propeller(s)

- Locknuts
- Rope guard

Tailshaft(s)

- Stern tube and gland
- Key and keyway
- Shaft sleeve or liner
- Struts and strut bearings

Notes: \_\_\_\_\_

MSM Vol. IV Ch. 6.I.4

46 CFR 178.420

MSM Ch. 6.F.4  
46 CFR 185.602

46 CFR 176.610

46 CFR 176.610

46 CFR 176.630  
MSM Ch. 8.D.2.a

**Lifeboats and buoyant apparatus**

- Coast Guard approval
- Lifeline
- Pendants
- Two paddles per lifeboat  
4 feet in length
- Marked with vessel name
- Watertight with proper battery  
Properly mounted, secure splices
- Watertight globe
- Float-free
- Marked with vessel name
- Stowage
- Properly sized and approved weak link
- Sea painter
- Retro-reflective tape

Inflatable buoyant apparatus

- Annual service

Inflatable liferafts

- Capacity of 6 or more persons
- Stowage
  - Float-free
- Annual service

Inflatable survival craft placards posted

Rescue boats / rescue platforms (vessels > 65 feet)

- Marked with vessel name
- Capacity
- Retro-reflective tape
- Small, lightweight with floatation
- Readily launched, easily maneuvered
- Capable of recovering person without capsizing

Survival craft maintenance (vessels > 65 feet)

- Manufacturer's instructions on board
- Inspections / examinations logged
- Weekly / monthly / quarterly / annually inspected / examined

Notes: \_\_\_\_\_

46 CFR 180.200(a)(2)  
46 CFR 180.175(d)  
46 CFR 180.175(f)  
46 CFR 180.010-8

46 CFR 185.604(g)

46 CFR 185.604(a)  
(46 CFR 180.20-5)  
46 CFR 180.130  
46 CFR 180.137  
46 CFR 180.037  
NVIC 2-63

46 CFR 180.175

46 CFR 180.175  
46 CFR 180.200

46 CFR 185.518

46 CFR 180.210  
(46 CFR 180.10-35)

46 CFR 185.604(e)  
46 CFR 185.604(d)  
46 CFR 185.604(i)  
NVIC 1-87

46 CFR 185.702  
46 CFR 185.720  
46 CFR 185.722  
46 CFR 185.724  
46 CFR 185.726

Lifejackets  
 Adult 152 Children ? (10%)

- Retro-reflective tape
- Lights (vessels on oceans / coastwise / Great Lakes routes)
  - Watertight
  - Batteries dated or changed annually
- Marked with vessel name
- Stowage
  - Marked
  - Child size PFDs separate from adult PFDs
  - Unlocked
  - If over 7 feet high, check quick release mechanism
- PFDs carried in addition to lifejackets
- Number of lifejackets rejected by inspector \_\_\_\_\_

Lifejacket donning placards posted

Ring lifebuoys

- Orange (vessels on oceans / coastwise routes)
- Lifeline (60 feet long)
- Watertight with 3-foot lanyard and corrosion-resistant clip
- Retro-reflective tape
- Marked with vessel name
- Stowage (not permanently secured)
- Vessels < 26 feet may carry 20-inch ring

Number with Lights	Number with Lines	Number of Others
1	1	0
Total Number of Ring Lifebuoys		1

First aid kit visible and readily available to the crew and properly marked "First Aid Kit"

Notes: \_\_\_\_\_

Hull and/or structural members gauged for material thickness as needed

46 CFR 176.802

Fastenings

- Rivets
- Welding
- Nails, screws, bolts
- Fastenings removed during this inspection

NVIC 3-68  
 MSM Vol. IV Ch. 6.H  
 NVIC 7-95

Internal structural members

- Bulkheads
- Decks
- Tank tops
- Longitudinals
- Floors
- Frames
- Intercostals
- Stiffeners
- Beams
- Connections
- Signs of electrolysis

46 CFR 176.610  
 NVIC 7-95

Vessel carefully examined for fractures and previous fracture repairs

Forward peak

Lazarette

Solid fixed ballast

46 CFR 178.510

**Watertight Integrity:**

NOTE: Guidance on watertight and weathertight inspections can be found in MSM Volume II, Chapter 6.F.5.

Hatches

- Dogs or other securing appliances
- Covers
- Gaskets
- Coamings

46 CFR 171.124  
 MSM Vol. IV Ch. 6.I.5

Notes: \_\_\_\_\_



Fixed firefighting for galley vent hood system (required on existing wood / FRP vessels)

46 CFR 181.400(d)  
46 CFR 181.425  
46 CFR 181.450

Fire main system and stations

- Fire main system tested
- Piping
- Valves
- Fittings
- Number hose stations required 1
- Fire hose
  - Minimum 5/8-inch hose and nozzle 25-50 feet in length
  - 1.5-inch hose and nozzle (required for vessels > 65 feet and vessels carrying > 49 passengers)
  - Nozzles and spanners

46 CFR 176.810(a)

46 CFR 181.310  
(46 CFR 181.15)

46 CFR 176.810(c)

46 CFR 181.320  
(46 CFR 181.15-10)

Number of Hoses Required	Number of Hoses On Board	Diameter of Each Hose	Length of Each Hose
1	1	1 1/2	50

Fire axe (vessels > 65 feet)

46 CFR 181.600  
(46 CFR 181.35-1)

- Located in or near primary operating station
- Marked with vessel name

Fire pumps tested

(ferry vessels carrying >49 passengers and all vessels > 65 feet)

46 CFR 181.300  
(46 CFR 181.10)  
46 CFR 181.610

NOTE: If fire pump is NOT required, new vessels must have three 2.5 gallon buckets with an attached lanyard; each bucket must be marked with the vessel's name.

- Piping
- Gauges
- Controls
- Manifold and valves
- Effective stream
- Strainers

Notes:

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Abandon Ship Drill:

- General alarms / signals
- Language understood by crew
- Familiarity with equipment
- Muster lists
- Lifejackets
- Egress procedures
- Muster of crew / passengers
- Familiarity with duties
- Deploy survival craft
- Crew response
- Provide equipment
- Communication w/ bridge
- (SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.h)

Location: \_\_\_\_\_ Time to Water: \_\_\_\_\_

Notes: \_\_\_\_\_

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Man Overboard Drill:

- Throw over ring buoy
- Crew provided proper equipment
- Familiarity with duties
- Post a lookout to assist master
- Retrieval MOB & rescue boat
- Familiarity with equipment
- Launch rescue boat
- Radio contact with USCG/vessels
- Crew member dons lifejacket
- Sound danger signal
- 46 CFR 185.520

Location: \_\_\_\_\_ Time in Water: \_\_\_\_\_

Notes: \_\_\_\_\_

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**Emergency lighting tested**

- Automatically activated if required
- Not portable or portable as required
- Connected to battery charger
- Operating capacity—2 hours
- At least two lights
- One at operating station
- One at entrance to propulsion / machinery space

46 CFR 183.432  
(46 CFR 184.30)  
46 CFR 183.430  
(46 CFR 184.30-1)

**Pollution Prevention:**

Bliges free of oil and trash / debris

Notes:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Section 4: Drills**

**Fire Drill:**

Initial response	Familiarity with duties	Space isolation
General alarms / signals	Familiarity with equipment	Smoke control
Crew response	Fire pumps started	Arrange care of passengers
Language understood by crew	Fire doors and dampers	Communications w/ bridge

(SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.i; NVIC 6-91)

Location: \_\_\_\_\_

Time on Scene: \_\_\_\_\_

Notes: **DISCUSS DRILLS**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Machinery:**

**Main steering system tested**

- Type **HyD**
- Rudder packing
- Hoses
- Tubing
- Piping
- Tiller arms and connectors double-nutted / cotter pinned

**Main propulsion engine tested**

- Capable of being secured from pilothouse
- Independent of speed control
- Foundations
- Controls
- Gauges
- Engine RPM / oil pressure / water temperature operational and visible at each operating station including alarms (existing vessels—only oil pressure / water temperature operational and visible)
- Safety devices
- Carburetor drip collector
- Backfire flame arrestor

**Cooling system**

- Temperature gauges (operating station)
- Installation

**Vents/Exhaust system**

- Loss of cooling alarm on vessel with wet exhaust (vessels with a separate exhaust cooling pump must have a loss of cooling alarm)
- Visible / audible
- Located at operating station
- Leaks & watertight integrity
- Clearance from combustibles

Notes:

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Fuel system

- Tank space properly vented
  - > 500 cubic feet = gooseneck > 2.5 inches
  - < 500 cubic feet = gooseneck > 1.5 inches
- Fuel tank vents
  - Vent openings not located adjacent to possible sources of vapor ignition
  - 30 x 30 mesh screen
- Independent fuel tanks grounded
  - Electrically bonded to a common ground
- Portable fuel tanks
  - Stowed on deck in racks
  - "No Smoking" placards posted
- Shutoff valves tested (tank and engines)
  - Located at the ends of each fuel line
  - If tank end not located outside of tank space, handle must be within 12-inch reach and shielded
  - Remote emergency fuel valves labeled for purpose and direction of operation / tested
- Fuel strainers
- Fuel tank fill hose
  - Top flange grounded to tank
  - Flexible hoses (SAE J-1942)
- Solid bottom type petcocks with tapered plugs and union bonnets
- Safety devices and alarms
- Termination of filling, sounding or vent pipes outside vessel

## Ventilation of machinery installations

- Switch for exhaust blower (gasoline vessels)
  - Interlocked with ignition
  - Warning sign posted
- Engine room intake and exhaust ventilation
  - Closure devices for spaces with fixed gas extinguishing system
  - Ducts secured and supported

## Vapor detector

- Operation procedures posted at operating station
- Proper number of sensors
- Operable for 30 seconds prior to engine start up
- Visual / audible alarm

Notes:

46 CFR 176.804

46 CFR 182.460  
(46 CFR 182.15-45)  
46 CFR 182.470  
(46 CFR 182.20-50)  
46 CFR 182.450(e)  
(46 CFR 182.15-35)

46 CFR 182.440(b)(4)  
(46 CFR 182.15-25(b)(4))

46 CFR 182.458  
MSM Ch. 10.A.2.i

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)

46 CFR 182.455(b)(6)  
(46 CFR 182.15-40(b)(5))  
(46 CFR 182.20-40(b)(5))  
46 CFR 182.445(g)  
(46 CFR 182.20-30(d))

46 CFR 182.455(b)(3)  
(46 CFR 182.15-40(a)(5))  
(46 CFR 182.20-40(a)(4))

46 CFR 182.470

46 CFR 182.460(e)

46 CFR 182.465  
(46 CFR 182.15-45)  
(46 CFR 182.20-45)

46 CFR 182.480

## Watertight bulkheads

- Piping
  - Metallic through fittings
- Valves
  - Reach rods
  - Free of sluice valves
  - Operable

## Shaft log free of excess leakage

- Reasonable dripping
- Testing ahead and astern
- Remaining adjustment on stuffing box bolts

## Bilge pump tested (1)

- Source of power for each pump
- Overboard discharge
- Visual indicator for auto bilge pump operation

## Bilge high level alarm

- Visible / audible
- Located at operating stations

## Electrical Equipment:

### Generators

- Circuit breakers interlocked
- Parallel operation must meet Subchapter J

### Switchboards and distribution panels

- Circuits and electrical equipment marked and identified
  - Warning sign for multiple power sources
- Protective covering
- Dripshield
- Overcurrent protection

### Cable, wiring, receptacles, outlets, accessories

- Installation
  - Wire type
  - Wire size
  - Splices
  - Connectors
  - Metal wire supports every 24 inches
- Grounding
- Overcurrent protection

46 CFR 182.720(d)  
(46 CFR 182.40-1)

46 CFR 179.320(d)  
46 CFR 171.114(b)

46 CFR 176.802(c)

46 CFR 176.804(h)  
46 CFR 182.520(a)

46 CFR 182.530(c)

46 CFR 182.530

46 CFR 183.322

46 CFR 183.330  
(46 CFR 183.05-15)  
(46 CFR 183.10-15)  
46 CFR 183.220

46 CFR 183.380

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 183.370  
46 CFR 183.380