**T-BOAT INSPECTION BOOK**

<table>
<thead>
<tr>
<th>Name of Vessel</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Official Number</td>
<td></td>
</tr>
<tr>
<td>Date Completed</td>
<td>Location</td>
</tr>
</tbody>
</table>

**SOLAS Certificates Issued**
- Yes
- No

**Route**
- Oceans
- Limited Coastwise
- Lakes / Bays / Sounds
- Coastwise
- Great Lakes
- Rivers

**Inspection Type**
- Inspection for Certification (COI)
- Reinspection
- Drydock Inspection

**Streamlined Inspection Program (SIP) Participant**
- Yes
- No

**Inspectors**
1. ________________________  2. ________________________
## Total Time Spent Per Activity:

### Regular Personnel (Active Duty)

<table>
<thead>
<tr>
<th>ACTIVITY TYPE</th>
<th>ACTIVITY</th>
<th>TRAINING</th>
<th>(PERS) MI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

TOTAL ADMIN HOURS | TOTAL TRAVEL HOURS

### Reserve Personnel

<table>
<thead>
<tr>
<th>ACTIVITY TYPE</th>
<th>ACTIVITY</th>
<th>TRAINING</th>
<th>(PERS) MI</th>
</tr>
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<tbody>
<tr>
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</tr>
</tbody>
</table>

TOTAL ADMIN HOURS | TOTAL TRAVEL HOURS

### Auxiliary Resources

<table>
<thead>
<tr>
<th>TOTAL BOAT HOURS</th>
<th>TOTAL AIRCRAFT HOURS</th>
</tr>
</thead>
</table>
Use of T-Boat Inspection Book:

This inspection book is intended to be used as a job aid by Coast Guard marine inspectors during inspections of U.S. flagged small passenger vessels subject to 46 CFR Subchapter T. The lists contained within this book are not intended to limit the inspection. Each marine inspector should determine the depth of inspection necessary. A checked box should be a running record of what has been inspected. It does not imply that the entire system has been inspected or that all or any items are in full compliance. This job aid does not constitute part of the official inspection record.

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, and are designated by parentheses.

**NOTE:** Guidance on how to conduct inspections of U.S. flagged small passenger vessels can be found in the Marine Safety Manual (MSM) Volume II, Chapter 6: Inspection of Vessels for Certification. All MSM cites listed in this book refer to MSM Volume II unless otherwise indicated.

### Pre-inspection Items:

- Review MSIS records.
  - MIPIP
  - MICOI
- Obtain copies of forms to be issued.

### Post-inspection Items:

- Issue letters/certificates to vessel.
- Complete MSIS entries.
  - MIAR
  - MSDS
  - MIDR
  - VFLD
  - VFID
- Initiate Report of Violation (ROV) if necessary.
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## Section 1: Administrative Items

### IMO Applicability Dates:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Date</th>
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<tbody>
<tr>
<td>SOLAS 1960</td>
<td>26 MAY 65</td>
</tr>
<tr>
<td>SOLAS 1974</td>
<td>25 MAY 80</td>
</tr>
<tr>
<td>1978 Protocol to SOLAS 1974</td>
<td>01 MAY 81</td>
</tr>
<tr>
<td>1981 Amendments (II-1 &amp; II-2)</td>
<td>01 SEP 84</td>
</tr>
<tr>
<td>1983 Amendments (III)</td>
<td>01 JUL 86</td>
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<tr>
<td><em>Various additional amendments to SOLAS</em></td>
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<tr>
<td>MARPOL 73/78 Annex I</td>
<td>02 OCT 83</td>
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<td>MARPOL 73/78 Annex V</td>
<td>31 DEC 88</td>
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<tr>
<td>COLREGS 1972</td>
<td>15 JUL 77</td>
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<td><em>Various additional amendments to COLREGS</em></td>
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<tr>
<td>Load Line 1966</td>
<td>21 JUL 68</td>
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<tr>
<td>STCW 1978</td>
<td>28 APR 84</td>
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<td>1991 Amendments</td>
<td>01 DEC 92</td>
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<td>01 JAN 96</td>
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<td>1995 Amendments</td>
<td>01 FEB 97</td>
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## Involved Parties & General Information:

<table>
<thead>
<tr>
<th>Vessel’s Representatives</th>
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<table>
<thead>
<tr>
<th>Phone Numbers</th>
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<td></td>
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<table>
<thead>
<tr>
<th>Owner—Listed on DOC (if applicable), or COFR</th>
</tr>
</thead>
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<tr>
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☐ No Change

<table>
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<tr>
<th>Operator</th>
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**Vessel Information:**

<table>
<thead>
<tr>
<th>Last Drydocking Date</th>
<th>Next Drydocking Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of Last Drydocking</td>
<td></td>
</tr>
<tr>
<td>Built Date (use delivery date)</td>
<td></td>
</tr>
<tr>
<td>Overall Length (in feet)</td>
<td></td>
</tr>
<tr>
<td>Maximum Passengers Allowed</td>
<td></td>
</tr>
<tr>
<td>Overnight Accommodations</td>
<td></td>
</tr>
<tr>
<td>☐ Yes ☐ No</td>
<td>If yes, how many? ______________</td>
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</table>


## Section 2: Certificates and Documents

<table>
<thead>
<tr>
<th>Name of Certificate</th>
<th>Issuing Agency</th>
<th>ID #</th>
<th>Port Issued</th>
<th>Issue Date</th>
<th>Exp. Date</th>
<th>Endors. Date</th>
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<tbody>
<tr>
<td>Certificate of Documentation</td>
<td>USCG</td>
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<td>Passenger Ship Safety (PSS)</td>
<td>USCG</td>
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<td>USCG</td>
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<td>International Tonnage (ITC)</td>
<td>USCG</td>
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<td>USCG</td>
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<tr>
<td>Document of Compliance (DOC)</td>
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<tr>
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<td>ID #</td>
<td>Port Issued</td>
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<td>Exp. Date</td>
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<tr>
<td>FCC Station License</td>
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<tr>
<td>FCC Safety Certificate</td>
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<td>□ No Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCC Operations Permit</td>
<td>FCC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ No Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCC Marine Radio Operator Permit</td>
<td>FCC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ No Change</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Certificates:

☐ COI posted
  • All pages visible
  46 CFR 176.107
  46 CFR 176.302

☐ Stability letter posted
  46 CFR 176.306

☐ Small Passenger Vessel (SPV) decal posted
  46 CFR 176.310

☐ Station bill posted
  (vessels > 65 feet with more than 4 crew members)
  46 CFR 185.514

☐ Waste management plan
  (oceangoing vessels ≥ 40 feet)
  33 CFR 151.57

☐ Red Cross first aid / CPR cards for 50% of crew
  NVIC 1-91

☐ Annual drug and alcohol program audit
  46 CFR Part 16

☐ Liferaft servicing certificates
  46 CFR 160.151-57(p)
  SOLAS 74/78 III/19.8

☐ Fixed fire extinguisher servicing certificates
  46 CFR 176.810(b)(2)

☐ Required international safety convention certificates posted and valid
  46 CFR 176.302

Manning Certification:

☐ Operator’s license
  46 CFR 15.805
  46 CFR 185.402

  • Name
  • Issue date
  • Tonnage
  • Route

Notes: __________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
Mate's license

- Name
- Issue date
- Tonnage
- Route

Logs and Manuals:

- Current training logbook
  - Date
  - General description of training

- Lifesaving equipment maintenance records
  - Periodic checks as required
  - Onboard training in use of lifesaving equipment (all crew members)
  - Visual inspection of survival craft / rescue boat and launching appliances
  - Operation of lifeboat / rescue boat engines
  - Lifesaving appliances, including lifeboat equipment examined

- Bridge log
  - Steering gear drills
  - Emergency steering drills
  - Monthly fire and lifeboat drills
  - Casualties (navigation equipment and steering gear failures reported)

- SOLAS training manual

Notes: _______________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Section 3: Inspection Items

Navigation Safety:

☐ Voyage plan  
(vessels on oceans / coastwise routes, vessels with overnight passengers)  
46 CFR 185.503

☐ Passenger count  
(if voyage plan not required)  
46 CFR 185.504

☐ Emergency instruction list posted  
46 CFR 185.510

☐ Navigation publications  
46 CFR 184.420

- Current and corrected charts (large enough scale to navigate safely)
- U.S. Coast Pilot
- Coast Guard Light List
- Tide tables
- Tidal current tables
- International Rules of the Road (SOLAS only)

☐ Navigation lights  
(vessels > 65 feet must meet UL 1104)  
46 CFR 183.420  
33 CFR Part 84  
72 COLREGS

- Side shields  
  - Fitted as needed
  - Painted black matte

☐ Radar  
46 CFR 184.404

☐ Magnetic compass  
(vessels on oceans / coastwise / limited coastwise routes)  
46 CFR 184.402  
- Illuminated (unless limited to daytime operations)

☐ Signaling devices (sound)  
33 CFR Part 86

- Whistle / horn tested
- Proper bell size

Notes: ____________________________________________________
_________________________________________________________
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_________________________________________________________
_________________________________________________________
_________________________________________________________
Signaling devices (distress)

- Flares and day smokes (correct number and expiration)
- Stowed in brightly colored, portable watertight container
- Marked “Distress Signals”
- Substitutions with proper expiration date

<table>
<thead>
<tr>
<th>IF vessel travels:</th>
<th>THEN it carry:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oceans / coastwise / limited coastwise / Great Lakes route</td>
<td>6 red hand flares and 6 orange day smokes</td>
</tr>
<tr>
<td>Lakes, bays, sounds / rivers route</td>
<td>3 red hand flares and 3 orange day smokes</td>
</tr>
</tbody>
</table>

Internal communications tested

- A fixed means of two-way communication from
  - Operating station to machinery space (single screw vessels)
  - Operating station to auxiliary steering single screw vessels)
  - Hand-held radios acceptable

Pilothouse control of propulsion engine systems

Radio equipment

<table>
<thead>
<tr>
<th>IF vessel travels:</th>
<th>THEN it must have:</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 1000 feet from shore but less than 20 NM</td>
<td>1 VHF</td>
</tr>
<tr>
<td>20 NM to 100 NM</td>
<td>1 VHF and 1 MF</td>
</tr>
<tr>
<td>100 NM to 200 NM</td>
<td>1 VHF, 1 MF, 1 SSB or INMARSAT radio, and 1 NAVTEX receiver</td>
</tr>
<tr>
<td>More than 200 NM</td>
<td>2 VHF, 1 MF, 1 SSB or INMARSAT radio, 1 NAVTEX receiver, 1 distress frequency receiver, and 1 automatic radiotelephone alarm signal generator</td>
</tr>
</tbody>
</table>

Notes: ________________________________
______________________________
______________________________
______________________________
☐ Emergency broadcast placard posted 46 CFR 184.506
☐ Electronic position fixing device 46 CFR 184.410
   (vessels on oceans route only)
☐ EPIRB (406 MHz) tested 46 CFR 185.728
   (46 CFR 180.15(g))
   • Float-free arrangement
   • Battery expiration date
   • HRU / Hydro expiration date
   • NOAA registered
   • Tests logged
   • Marked with vessel name 46 CFR 185.604(c)
☐ Public address system tested 46 CFR 184.610
   (also required on existing vessels by 11 MAR 01)

<table>
<thead>
<tr>
<th>IF vessel is:</th>
<th>AND carries:</th>
<th>THEN vessel must have:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 65 feet</td>
<td></td>
<td>Fixed installation</td>
</tr>
<tr>
<td>≤ 65 feet</td>
<td>&gt; 49 passengers</td>
<td>Battery bullhorn</td>
</tr>
<tr>
<td>≤ 65 feet</td>
<td>≤ 49 passengers</td>
<td>None required</td>
</tr>
</tbody>
</table>

☐ Bridge windows
   • Safety glass 46 CFR 177.1010
   • Adequate strength 46 CFR 177.1020
   • Allow 70% light / safety glass 46 CFR 177.1030

**Structural Integrity:**

☐ External hull structure 46 CFR 176.802
   • Decks
   • Shell
   • Bulkheads
   • Strength members
   • Visible damage
   • Obvious repairs, modifications, or alterations
   • Rails / guards

Notes: __________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Hull markings
- Draft marks and loading marks
- Name / hailing port

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

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)

Scuppers / freeing ports

Dead light covers on port lights below main deck

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

Notes: ________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
General Health and Safety:

☐ General alarm tested 46 CFR 183.550

☐ Upper decks marked for maximum number of passengers per stability letter 46 CFR 185.602(g)

☐ Crew accommodations (46 CFR 177.30-5)
  • Adequate berthing 46 CFR 177.710
  • Sanitary conditions 46 CFR 176.818

☐ Passenger accommodations (46 CFR 177.30-5)
  • Adequate berthing 46 CFR 177.810
  • Adequate seating 46 CFR 177.820
  • Sanitary condition 46 CFR 176.818

☐ Means of escape 46 CFR 177.500
  • Operable from both sides 46 CFR 185.606
  • Marked “Emergency Exit, Keep Clear”

☐ Cooking and heating systems 46 CFR 177.410(c)(1)
  • B-15 Class fire boundaries 46 CFR 184.240
  • No open-flame or high-heat system on GP / FRP vessels 46 CFR 184.220
  • LPG / CNG stowage
  • Shutoff valves installed on gas systems
  • Sea rails installed on galley stoves

☐ Sanitary inspection 46 CFR 176.818
  • Galley
  • Serving pantries
  • Lockers

☐ Ventilation 46 CFR 177.600
  • Ventilation

☐ Passenger Safety Orientation 46 CFR 185.506
  • Public announcement
  • Card or pamphlet

Notes: ______________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
Crew and passenger list  46 CFR 185.502

Ground Tackle:

Proper ground tackle  46 CFR 184.300
(46 CFR 184.10-1)

<table>
<thead>
<tr>
<th>Number of Anchors</th>
<th>Weight (lbs.)</th>
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<table>
<thead>
<tr>
<th>Number of Cables</th>
<th>Length</th>
<th>Size</th>
</tr>
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<tbody>
<tr>
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</table>

Mooring lines  46 CFR 184.300
(46 CFR 184.10-1)

Sails and rigging  46 CFR 177.330

Lifesaving 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

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
<th>Capacity (Persons)</th>
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</thead>
<tbody>
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Notes:_________________________________________________________________________________
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_______________________________________________________________________________________
_______________________________________________________________________________________
_______________________________________________________________________________________

13
Lifefloats and buoyant apparatus
- Coast Guard approval
- Lifeline
- Pendants
- Two paddles per lifefloat
  - 4 feet in length
  - Marked with vessel name
- Waterlight 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: ____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Lifejackets

Adult ________ 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

46 CFR 180.71

46 CFR 185.604(h)
(46 CFR 180.25-25)

46 CFR 180.75
(46 CFR 180.25-20)

46 CFR 185.604(b)
(46 CFR 180.25-15)

46 CFR 180.78
(46 CFR 180.25-10)

46 CFR 185.604(f)

46 CFR 180.72

Lifejacket donning placards posted

46 CFR 185.516

Ring lifebuoys

- Orange (vessels on oceans / coastwise routes)
- Lifeline (60 feet long)
- Waterlight 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

46 CFR 180.70
(46 CFR 181.30-1)
(46 CFR 181.30-10)

46 CFR 185.604(i)

46 CFR 185.604(a)

NVIC 1-87

46 CFR 180.70(b)

<table>
<thead>
<tr>
<th>Number with Lights</th>
<th>Number with Lines</th>
<th>Number of Others</th>
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</table>

Total Number of Ring Lifebuoys

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

46 CFR 184.710
46 CFR 160.041

Notes: ____________________________________________________
__________________________________________________________
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__________________________________________________________
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__________________________________________________________
Fire Protection:

☐ Fire and smoke detection systems
(required on existing wood / FRP vessels)
- Sensors tested
- Alarms tested

☐ Portable and semiportable fire extinguishers

- Annual service in accordance with NFPA 10
  - Date cylinders hydro-tested
- Proper location

☐ Fixed fire extinguishing systems

- Annual service
  - Date cylinders weighed
  - Date cylinders hydro-tested
- Sprinklers tested in vehicle spaces
- Alarms
- Engine / power ventilation shutdowns tested
  (engine shutdown not required on existing vessels with CO₂, BUT is required with Halon)
- Manual ventilation closures on protected spaces
- Instructions at controls and in space
- Piping
- Valves
- Controls

<table>
<thead>
<tr>
<th>Required</th>
<th>On Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Class</td>
</tr>
</tbody>
</table>

Spaces Protected | Agent | Capacity

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

46 CFR 176.810(a)

- Fire main system tested
  - Piping
  - Valves
  - Fittings

- Number hose stations required

- 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

Fire main system and stations

46 CFR 181.300
46 CFR 181.310
46 CFR 181.320
46 CFR 181.600

Fire pumps tested

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

46 CFR 181.300
46 CFR 181.310
46 CFR 181.600

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:__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
Machinery:

☐ Main steering system tested

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

☐ Auxiliary steering system (if required) operable

- Type

☐ 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
    (existing vessels—only oil pressure / water temperature operational and visible)
- Safety devices
- Carburetor drip collector
- Backfire flame arrestor

☐ Cooling system

- Type of engine cooling system
- Temperature gauges (operating station)
- Installation

Notes: ____________________________________________________________

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__________________________________________________________

18
Exhaust system

- Type of exhaust cooling system
  46 CFR 182.425

- 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
  46 CFR 182.430

- Leaks
  - Seams
  - Elbows
  - Joints
  - Flexible hoses
  (46 CFR 182.15-20(a))

Fuel system

- Tank space properly vented
  - > 500 cubic feet = gooseneck > 2.5 inches
  - < 500 cubic feet = gooseneck > 1.5 inches
  46 CFR 182.460

- Fuel tank vents
  - Vent openings not located adjacent to
    possible sources of vapor ignition
  - 30 x 30 mesh screen
  46 CFR 182.450(e)

- Independent fuel tanks grounded
  - Electrically bonded to a common ground
  46 CFR 182.440(b)(4)

- Portable fuel tanks
  - Stowed on deck in racks
  - “No Smoking” placards posted
  MSM Ch. 10.A.2.i

- 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
  46 CFR 185.608

- Fuel strainers
  46 CFR 182.455(b)(6)

- Fuel tank fill hose
  - Top flange grounded to tank
  - Flexible hoses (SAE J-1942)
  46 CFR 182.445(g)

- Solid bottom type petcocks with tapered plugs
  and union bonnets
  46 CFR 182.455(b)(3)

- Safety devices and alarms

- Termination of filling, sounding or vent pipes
  outside vessel
  46 CFR 182.20-40(a)(4)

Notes:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

________________________________________________________________________
Ventilation of machinery installations 46 CFR 182.470
- Switch for exhaust blower (gasoline vessels)
  - Interlocked with ignition 46 CFR 182.460(e)
  - Warning sign posted
- Engine room intake and exhaust ventilation 46 CFR 182.465
  - Closure devices for spaces with fixed gas extinguishing system (46 CFR 182.15-45)
  - Ducts secured and supported (46 CFR 182.20-45)

<table>
<thead>
<tr>
<th>Ventilators</th>
<th>Number and Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Natural</td>
</tr>
<tr>
<td>Machinery Space</td>
<td></td>
</tr>
<tr>
<td>Fuel Tank Space</td>
<td></td>
</tr>
</tbody>
</table>

Vapor detector 46 CFR 182.480
- Operation procedures posted at operating station
- Proper number of sensors
- Operable for 30 seconds prior to engine start up
- Visual / audible alarm

Machinery guards 46 CFR 177.960 (46 CFR 177.35-15)
- Installed over exposed gears
- Belts
- Rotating machinery

Vital systems piping 46 CFR 182.710 (46 CFR 182.40-5)

Watertight bulkheads 46 CFR 182.720(d) (46 CFR 182.40-1)
- Piping
  - Metallic through fittings
- Valves
  - Reach rods
  - Free of sluice valves
  - Operable 46 CFR 179.320(d)
  - Operable 46 CFR 171.114(b)

Notes: _____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

20
Non-metallic piping materials
- Rigid pipe non-vital systems only
- Flexible hose must meet SAE J-1492

Shaft log free of excess leakage
- Reasonable dripping
- Testing ahead and astern
- Remaining adjustment on stuffing box bolts

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

Portable bilge pump tested (5 GPM)
- Suction capable of reaching the bottom of all compartments

Bilge piping
- Check valves in each compartment or stop / check valves at manifold
- Valve fitted on collision bulkhead
  - Screw down valve type
  - Operable from weatherdeck if forward; readily accessible if aft

Bilge high level alarm
- Visible / audible
- Located at operating stations

Deck machinery
- Windlass
- Winches
- Capstans
- Controls
- Guards

Notes: ____________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

21
Pressure vessels required to be periodically tested

- Inspected every 3 years

<table>
<thead>
<tr>
<th>Service</th>
<th>Working Pressure</th>
<th>Relief Valve Setting</th>
<th>Date Tested or Examined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Electrical Equipment:

- Primary power and light system 46 CFR 183.310
  - Voltage ______________________
  - Electrical source
    - Generator
    - Battery
  - Grounding 46 CFR 183.376

- Main engine generators 46 CFR 176.806

- Independent generators 46 CFR 183.322
  - Multiple generators
    - Independent prime movers
    - Circuit breakers interlocked
    - Parallel operation must meet Subchapter J

Notes: ____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

22
Batteries (and alternator, if required) 46 CFR 176.806
- Overload protection 46 CFR 183.310
- Ventilation 46 CFR 183.350
- Protective covering 46 CFR 183.354
- Battery charger with ammeter connected to charging circuit 46 CFR 183.05-20
- Cable connectors (permanent type)
- Corrosion-resistant tray or mounting

<table>
<thead>
<tr>
<th>Service</th>
<th>Location</th>
</tr>
</thead>
</table>

Switchboards and distribution panels 46 CFR 183.330
- Circuits and electrical equipment marked and identified 46 CFR 183.05-15
  - Warning sign for multiple power sources (46 CFR 183.10-15) 46 CFR 183.220
- Protective covering
- Dripshield
- Overcurrent protection 46 CFR 183.380

Radios fused at main panel 46 CFR 183.392

Cable, wiring, receptacles, outlets, accessories 46 CFR 183.340
- Installation 46 CFR 183.05-40
  - Wire type (46 CFR 183.05-45) 46 CFR 183.05-50
  - Wire size (46 CFR 183.10-20)
  - Splices
  - Connectors
  - Metal wire supports every 24 inches
- Grounding
- Overcurrent protection 46 CFR 183.370
  46 CFR 183.380

Notes: ..............................................................................................................................
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23
Miscellaneous motors and controllers

- Proper location
- Grounding

Lighting fixtures

- Suitable guards
- Properly secured

46 CFR 183.320
46 CFR 183.372
(46 CFR 18.01-5)

Portable lighting

- At least two lights
  - One at operating station
  - One at entrance to propulsion / machinery space

46 CFR 183.410
(46 CFR 184.30-1)

Emergency lighting tested

- Type
- Automatically activated
- Not portable
- Connected to battery charger
- Operating capacity—2 hours

46 CFR 183.430
(46 CFR 184.30)

Pollution Prevention:

- Oil pollution placard posted 33 CFR 155.450
- MARPOL V placard posted 33 CFR 151.59
- Bilges free of oil and trash / debris 46 CFR 176.830
- Marine sanitation device 46 CFR 176.818

- Type
- Sanitary
- Discharge valve secured and locked
- Tank vent 30 x 30 mesh screen
- ¾-full level indicator

46 CFR 184.704
MSM Ch. 18.K.7.f(1)
33 CFR 159.95
33 CFR 159.83

Notes: ____________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

24
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: ___________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
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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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Section 5: Drydock Inspection Items

Hull Structural Integrity:

☐ Vessel plans available 46 CFR 176.612
(vessels with load lines)

☐ External structural members 46 CFR 176.610
  NVIC 7-95
  • Plating
  • Planking
  • Caulking
  • Reinforcing straps
  • Stem
  • Transom
  • Bilge keels
  • Keel
  • Welds
  • Pitting
  • Signs of electrolysis

Overall Condition:

| Poor | Good |

Areas of particular interest: __________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
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

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

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: _______________________________________________________

___________________________________________________________

___________________________________________________________

___________________________________________________________

___________________________________________________________

28
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

Compartments 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: _____________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
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
  • Anchors
  • Cables

(46 CFR 184.10-1)

Notes: _____________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________
__________________________________________________________

30
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: _____________________________________________________
__________
__________
__________
__________
__________
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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__________________________________________________________
__________________________________________________________

32
Recommended US Vessel Deficiency Procedures:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identify deficiency.</td>
</tr>
<tr>
<td>2</td>
<td>Inform vessel representative.</td>
</tr>
<tr>
<td>3</td>
<td>Record on the Deficiency Summary Worksheet (next page).</td>
</tr>
<tr>
<td>4</td>
<td>If deficiency is corrected prior to end of inspection, go to Step 7.</td>
</tr>
<tr>
<td>5</td>
<td>If deficiency is unable to be corrected prior to end of inspection, issue CG-835 in accordance with table below.</td>
</tr>
</tbody>
</table>

**IF deficiency:**
- Does NOT immediately impact crew/passenger safety, hull seaworthiness, or the environment, e.g.,
  - Missing placards
  - Permanent repairs to cracked frame
- Allows vessel operations to be MODIFIED to meet less stringent requirements, e.g.,
  - Expired international certificates
  - Automation defect
  - Insufficient lifesaving equipment
- DOES immediately impact crew/passenger safety, hull seaworthiness, or the environment, and cannot be modified to meet less stringent requirements, e.g.,
  - Missing or defective firefighting equipment
  - Structural defect or damage

**THEN issue CG-835:**
- That provides a specific time for correcting deficiency, e.g.,
  - “X” number of days
  - At next drydock
- That restricts operation of vessel to meet current vessel conditions, e.g.,
  - Reduced route
  - Increased crew
  - Fewer passengers
- That requires the deficiency to be corrected prior to operating vessel (“NO SAIL” item), e.g.,
  - Prior to carrying passengers
  - Prior to carrying cargo

| 6    | Enter CG-835 data in MIDR. |
| 7    | Enter deficiency data in MSDS. |
| 8    | Initiate Report of Violation (ROV) if necessary. |
### Deficiency Summary Worksheet:

<table>
<thead>
<tr>
<th>Deficiency</th>
<th>MSIS Code</th>
<th>Req’t. Issued / Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Deficiencies identified should be listed with MSIS codes. At completion of inspection/examination, any outstanding deficiencies shall be entered in MIDR or PSDR as appropriate. All deficiencies found (outstanding and completed) shall be entered in the Deficiency Summary. Worklist items, which serve only as memory joggers to complete inspection/examination (e.g., test emergency fire pump), should not be coded as deficiencies.

**MSIS Codes for Deficiencies:**

<table>
<thead>
<tr>
<th>MSIS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>Ballast</td>
</tr>
<tr>
<td>BI</td>
<td>Bilge</td>
</tr>
<tr>
<td>BA</td>
<td>Boiler, Aux.</td>
</tr>
<tr>
<td>BM</td>
<td>Boiler, Main</td>
</tr>
<tr>
<td>CS</td>
<td>Cargo</td>
</tr>
<tr>
<td>DM</td>
<td>Deck Machinery</td>
</tr>
<tr>
<td>DL</td>
<td>Doc. Lics., Pmts.</td>
</tr>
<tr>
<td>DC</td>
<td>Dry Cargo</td>
</tr>
<tr>
<td>ES</td>
<td>Electrical</td>
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<tr>
<td>FF</td>
<td>Firefighting</td>
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<td>FL</td>
<td>Fuel</td>
</tr>
<tr>
<td>GS</td>
<td>General Safety</td>
</tr>
<tr>
<td>HA</td>
<td>Habitation</td>
</tr>
<tr>
<td>HU</td>
<td>Hull</td>
</tr>
<tr>
<td>IC</td>
<td>I/C Engine</td>
</tr>
<tr>
<td>LS</td>
<td>Lifesaving</td>
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<tr>
<td>MI</td>
<td>Miscellaneous</td>
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<tr>
<td>NS</td>
<td>Navigation</td>
</tr>
<tr>
<td>PP</td>
<td>Propulsion</td>
</tr>
<tr>
<td>SS</td>
<td>Steering</td>
</tr>
</tbody>
</table>
**Conversions:**

### Distance and Energy

<table>
<thead>
<tr>
<th></th>
<th>Kilowatts (kW)</th>
<th>Feet (ft)</th>
<th>Long Ton (LT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horsepower (hp)</td>
<td>X 1.341</td>
<td>X 3.281</td>
<td>X .98421</td>
</tr>
</tbody>
</table>

### Liquid *(NOTE: Values are approximate.)*

<table>
<thead>
<tr>
<th>Liquid</th>
<th>bbl/LT</th>
<th>m³/t</th>
<th>bbl/m³</th>
<th>bbl/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshwater</td>
<td>6.40</td>
<td>1.00</td>
<td>6.29</td>
<td>6.29</td>
</tr>
<tr>
<td>Saltwater</td>
<td>6.24</td>
<td>.975</td>
<td>6.13</td>
<td>5.98</td>
</tr>
<tr>
<td>Heavy Oil</td>
<td>6.77</td>
<td>1.06</td>
<td>6.66</td>
<td>7.06</td>
</tr>
<tr>
<td>DFM</td>
<td>6.60</td>
<td>1.19</td>
<td>7.48</td>
<td>8.91</td>
</tr>
<tr>
<td>Lube Oil</td>
<td>7.66</td>
<td>1.20</td>
<td>7.54</td>
<td>9.05</td>
</tr>
</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th></th>
<th>1 Long Ton</th>
<th>1 Metric Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 2240 lbs</td>
<td>= 2204 lbs</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1 Short Ton</th>
<th>1 Cubic Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 2000 lbs</td>
<td>= 7.48 gal</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1 Barrel (oil)</th>
<th>1 psi</th>
<th>.06885 Bar</th>
<th>2.3106 ft of water</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 5.61 ft = 42 gal = 6.29 m³</td>
<td>= .06885 Bar</td>
<td>= 2.3106 ft of water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Temperature: Fahrenheit = Celsius *(°F = 9/5 °C + 32 and °C = 5/9 (°F – 32))*

<table>
<thead>
<tr>
<th></th>
<th>°F</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-17.8</td>
<td>80</td>
</tr>
<tr>
<td>32</td>
<td>0</td>
<td>90</td>
</tr>
<tr>
<td>40</td>
<td>4.4</td>
<td>100</td>
</tr>
<tr>
<td>50</td>
<td>10.0</td>
<td>110</td>
</tr>
<tr>
<td>60</td>
<td>15.6</td>
<td>120</td>
</tr>
<tr>
<td>70</td>
<td>21.1</td>
<td>150</td>
</tr>
</tbody>
</table>

### Pressure: Bars = Pounds per square inch

<table>
<thead>
<tr>
<th></th>
<th>1 Bar</th>
<th>2 bars</th>
<th>3 Bars</th>
<th>4 Bars</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 14.5 psi</td>
<td>5 Bars</td>
<td>72.5 psi</td>
<td>9 Bars</td>
<td>130.5 psi</td>
</tr>
<tr>
<td>= 29.0 psi</td>
<td>6 Bars</td>
<td>87.0 psi</td>
<td>10 Bars</td>
<td>145.0 psi</td>
</tr>
<tr>
<td>= 43.5 psi</td>
<td>7 Bars</td>
<td>101.5 psi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>= 58.0 psi</td>
<td>8 Bars</td>
<td>116.0 psi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>