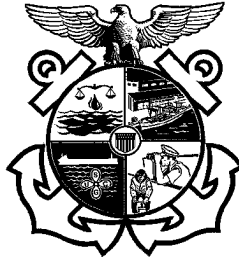


United States Coast Guard



Inspected Towing Vessel Inspector Job Aid

Name of Vessel		
Official Number	Activity Number	
Date Completed	Third Party/Class	
Location		
Routes		
<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
Coast Guard Option:	TSMS Option	
<input type="checkbox"/> Inspection for Certification (COI)	<input type="checkbox"/> Inspection for Certification (COI)	
<input type="checkbox"/> Annual <input type="checkbox"/> Damage Survey	<input type="checkbox"/> Damage Survey	
<input type="checkbox"/> Drydock	<input type="checkbox"/> Other:	
Marine Inspectors & Vessel Examiners		
1. _____	3. _____	
2. _____	4. _____	

Job Aid ITVI
Rev. November 2018

Use of Inspected Towing Vessel Inspection Book:

This examination book is intended to be used as a job aid by Coast Guard inspected towing vessel inspectors and examiners for use on towing vessels regulated under Subchapter M. Each book contains an extensive list of possible inspection items. The depth and scope of the inspection must be determined by the Marine Inspector or Vessel Examiner based on their observations.

Marine Inspectors and Vessel Examiners must pay close attention to the applicability dates of the regulations when conducting inspections to determine which regulations and/or standards apply.

The tasks contained within this Job Aid are not intended to limit the scope or depth of inspection. The following symbols indicate:

- ☐ The check box should be a running record of what has been inspected and does not imply that the entire system has been inspected or that all or any items are in full compliance.
- “T” This symbol indicates items that should be inspected during a Towing Safety Management System (TSMS) COI for renewal or initial. There is no requirement for the CG to conduct annual exams or endorse a COI for a TSMS vessel on an annual basis.
- ◆ Indicates items that are examined during a CG annual certificate for inspection. Annual inspections are less detailed in scope and should focus on essential systems. Other systems may be inspected if objective evidence warrants expansion of the exam. Objective evidence can include failure to meet inspection requirements listed in this job aid or failure of the Safety Management System.

This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to CFRs, IMO publications, NVIC's, CG-CVC Policy Letters, CG-CVC MMS documents, and any locally produced cite guides for specific regulatory references. This Job Aid does not constitute part of the official inspection record. Additional decision aids for Subchapter M can be found via the Towing Vessel National Center of Expertise (TVNCOE) website: [TugSafe](#) and [TugSafe Central](#).

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Section 1: Pre-Inspection Items

Vessel Information:

Research vessel details: MSM I/12.G.5

<input type="checkbox"/> Third Party Organization	
Last Drydocking Date	Next Drydocking Date
Location of Last Drydocking	
Date of Last Audit and Survey Audit: _____ Survey: _____	
<input type="checkbox"/> Outstanding deficiencies/conditions or TPO non-conformities:	
International Route <input type="checkbox"/> Yes <input type="checkbox"/> No	Conversions / Modifications
Call Sign	<input type="checkbox"/> No Change
Gross Tons	<input type="checkbox"/> No Change
Built Date (use delivery date)	<input type="checkbox"/> No Change
Overall Length (in feet)	<input type="checkbox"/> No Change

- Reviewed history (narrative, deficiencies, and special notes).
- Verified user fees.
- Generate a new activity.
- Verified Certificate of Financial Responsibility is valid.
- Verified TSMS option
- Vessel current on audits/surveys.

Applicability:

- Verified authority. 46 USC 3301(15)
46 CFR 136.212
- Verified route (freshwater/saltwater service). 46 CFR 137.300
46 CFR 136.230
- Verified inspection option. 46 CFR 137.200
46 CFR 137.202

Involved Parties:

- Identified vessel's representative.
- Determined location and time of inspection. 46 CFR 137.202
- Discussed inspection expectation (scope). MPS-PR-SEC-01

Owner or Representative
Individual
Phone Number

Third Party Company
Individual
Phone Number

Owner—Listed on COD
<input type="checkbox"/> No Change

Other Party
<input type="checkbox"/> No Change

- Discussed outstanding conditions and/or CG-835s.
- Discussed planned repairs and alterations.

Safety and Potential Hazards (See section 3).

- Identified potential hazards. NFPA 306
29 CFR 1910
29 CFR 1915.4
- Identified possible confine space issues. MSM I/10 App.A
- Prepare personal protective equipment. MSM I/10 App. A
Quattro Operator's Manual
- Verify team knowledge on policy for leaving a space due to hazardous condition. MSM I/10 App. A
- Verify competent person scope of responsibilities. MSM II/A.5

Section 2: Inspection Items

<input type="checkbox"/> ◆T	1. Inspect external portions of vessel prior to embarkation	46 CFR 144.160(a) & (b) 46 CFR 67.121
<input type="checkbox"/> ◆T	2. Inspect Vessel Security Plan or Alternative Security Program	46 CFR 140.660 33 CFR 104.120(a)
<input type="checkbox"/>	3. Inspect security records	33 CFR 104.235(b)(1) SOLAS 14 XI-2/4.2
<input type="checkbox"/>	4. Inspect security equipment	33 CFR 104.405(a)(9) SOLAS 14 XI-2/6
<input type="checkbox"/> ◆T	5. Evaluate crew competency	33 CFR 104.200(b)(2) SOLAS 14 XI-2/4.2
<input type="checkbox"/> ◆T	6. Review Certificate of Inspection (COI)	46 CFR 136.200 46 CFR 136.220
<input type="checkbox"/>	7. Verify vessel's stability documents	46 CFR 144.300(a) 46 CFR 144.305
<input type="checkbox"/> ◆T	8. Inspect Merchant Mariner Credentials (MMCs), Medical Certificates & Transportation Worker Identification Credentials (TWICs)	46 CFR 15.515 46 CFR 15.805(a)(5)
<input type="checkbox"/>	9. Inspect compliance with Drug and Alcohol Program	46 CFR 16.401
<input type="checkbox"/> ◆T	10. Inspect personnel records and emergency duty station assignments	46 CFR 140.400(a) 46 CFR 140.400(b)
<input type="checkbox"/>	11. Verify State Registration	33 CFR 173.21 33 CFR 173.23
<input type="checkbox"/> ◆T	12. Verify Certificate of Documentation (COD)	46 CFR 67.7 46 CFR 67.313
<input type="checkbox"/> ◆	13. Inspect Federal Communication Commission (FCC) documents	47 CFR 80.403
<input type="checkbox"/> ◆	14. Review Health and Safety Plan	46 CFR 140.500 46 CFR 140.505
<input type="checkbox"/> ◆T	15. Inspect logbooks, towing vessel record (TVR) or TSMS record	46 CFR 140.905
<input type="checkbox"/>	16. Inspect Nontank Vessel Response Plan (NTVRP)	33 CFR 155.5015
<input type="checkbox"/>	17. Oil Record Book (if required)	33 CFR 151.25(a) 33 CFR 151.25(i)
<input type="checkbox"/>	18. Inspect garbage management plan and placard(s)	33 CFR 151.51 33 CFR 151.57(a)
<input type="checkbox"/> ◆	19. Inspect ballast water management documents	33 CFR 151.2060
<input type="checkbox"/> ◆	20. Verify compliance with the Vessel General Permit (VGP)	VGP 1.5.1.1 & 10 VGP Table 1

<input type="checkbox"/> ◆	21. Verify crew training	46 CFR 140.410 46 CFR 140.415
<input type="checkbox"/> T	22. Verify documentation applicable Towing Safety Management System (TSMS)	46 CFR 138.115 46 CFR 138.305(f)
<input type="checkbox"/>	23. Inspect navigation assessment	46 CFR 140.635 46 CFR 140.640
<input type="checkbox"/> ◆	24. Inspect charts and publications	46 CFR 140.705(b)(1) 33 CFR 164.72(b)(1)
<input type="checkbox"/>	25. Inspect radar(s)	46 CFR 140.710 33 CFR 164.72(a)(1)
<input type="checkbox"/> ◆	26. Inspect communications equipment	46 CFR 140.715(a) 33 CFR 164.72(a)(3)
<input type="checkbox"/> ◆	27. Inspect navigation lights and dayshapes	46 CFR 140.720 46 CFR 143.415
<input type="checkbox"/>	28. Inspect sound signaling device(s)	46 CFR 140.720 33 CFR 83.33 (Rule 33)
<input type="checkbox"/>	29. Inspect fathometer/echo depth-sounding device	46 CFR 140.725(a) 33 CFR 164.72(a)(5)
<input type="checkbox"/>	30. Inspect vessel search lights	46 CFR 140.725(b) 33 CFR 164.72(a)(2)
<input type="checkbox"/>	31. Inspect electronic position fixing device (GPS)	46 CFR 140.725(c) 33 CFR 164.72(a)(6)
<input type="checkbox"/>	32. Inspect magnetic compass/swing meter	46 CFR 140.725(d) 33 CFR 164.72(a)(4)
<input type="checkbox"/> ◆T	33. Inspect general alarm system	46 CFR 143.235 46 CFR 143.245
<input type="checkbox"/>	34. Inspect alarms at operating station(s)	46 CFR 143.230(a)
<input type="checkbox"/>	35. Inspect internal communications	46 CFR 143.240(b)
<input type="checkbox"/> ◆	36. Inspect pilothouse alerter system or Bridge Navigation Watch Alert System (BNWAS)	46 CFR 143.450(a) SOLAS 14 V/19.2.2.4
<input type="checkbox"/>	37. Inspect Automated Identification System (AIS)	33 CFR 164.46
<input type="checkbox"/>	38. Verify operating station visibility	46 CFR 144.905(b)
<input type="checkbox"/> ◆T	39. Inspect survival craft	46 CFR 141.305 46 CFR 141.330
<input type="checkbox"/> ◆T	40. Inspect life jackets	46 CFR 141.340
<input type="checkbox"/> ◆T	41. Inspect immersion suits	46 CFR 141.350
<input type="checkbox"/> ◆T	42. Inspect ring life buoy	46 CFR 141.360 46 CFR 160.050
<input type="checkbox"/> ◆T	43. Inspect distress signals	46 CFR 141.375 46 CFR 141.375(c)
<input type="checkbox"/> ◆	44. Inspect Emergency Position Indicating Radio Beacon (EPIRB)	46 CFR 141.380 47 CFR 80.1085(a)(6)

<input type="checkbox"/>	45. Inspect line throwing equipment	46 CFR 141.385 46 CFR 160.040
<input checked="" type="checkbox"/> T	46. Verify fire hazards minimized	46 CFR 142.220(a) 46 CFR 143.220(a)
<input checked="" type="checkbox"/>	47. Inspect fire fighter's outfit	46 CFR 142.226(a)
<input type="checkbox"/>	48. Inspect fire axe	46 CFR 142.227
<input checked="" type="checkbox"/> T	49. Inspect portable firefighting extinguishers	46 CFR 142.230(d) SOLAS 14 II-2/10.3
<input checked="" type="checkbox"/> T	50. Inspect semi-portable firefighting equipment	46 CFR 142.300 46 CFR 142.315(a)
<input checked="" type="checkbox"/> T	51. Inspect fixed fire-extinguishing system	46 CFR 142.240(a) 46 CFR 142.215
<input checked="" type="checkbox"/> T	52. Inspect portable fire pump and equipment	46 CFR 142.325(e)
<input checked="" type="checkbox"/> T	53. Inspect fixed fire pump and fire main	46 CFR 142.325(a)
<input checked="" type="checkbox"/> T	54. Inspect fire-detection system	46 CFR 142.330(a)
<input type="checkbox"/> T	55. Inspect main propulsion system	46 CFR 143.205(c)
<input type="checkbox"/>	56. Inspect fuel system	46 CFR 143.255 46 CFR 143.265
<input type="checkbox"/>	57. Inspect bilge system	46 CFR 143.275 46 CFR 143.205
<input type="checkbox"/>	58. Examine unfired pressure vessels (UPVs)	46 CFR 143.300(c)
<input checked="" type="checkbox"/> T	59. Inspect steering gear	46 CFR 137.220(d)
<input checked="" type="checkbox"/> T	60. Verify additional requirements for vessels that move tank barges carrying oil or hazardous materials in bulk	46 CFR 143.585(a) 46 CFR 143.600
<input type="checkbox"/>	61. Inspect electrical conductors, connections and equipment	46 CFR 143.575(a)(1) 46 CFR 143.575(a)(9)
<input type="checkbox"/> T	62. Inspect main service generator(s) and prime mover(s)	46 CFR 143.555(a)(2) 46 CFR 143.555(b)(1) & (b)(3)
<input type="checkbox"/>	63. Inspect battery installation	46 CFR 143.555(b)(9)
<input type="checkbox"/>	64. Inspect distribution panels and switchboards	46 CFR 143.560
<input checked="" type="checkbox"/> T	65. Inspect hatches and Class-1 watertight doors	46 CFR 144.305 46 CFR 144.330
<input checked="" type="checkbox"/> T	66. Inspect watertight bulkhead penetrations	46 CFR 143.400(h) 46 CFR 143.265(d)(2)(iii)
<input type="checkbox"/>	67. Inspect hull structure	46 CFR 144.200 & .215 ABS 7-4-1/1
<input checked="" type="checkbox"/>	68. Inspect Marine Sanitation Device (MSD)	33 CFR 159.7(a)(1) 33 CFR 159.7(a)(2)
<input checked="" type="checkbox"/>	69. Inspect oil transfer procedures and pollution placard	33 CFR 155.720 33 CFR 155.730
<input checked="" type="checkbox"/>	70. Inspect transfer hose(s)/piping, fittings and containment	33 CFR 154.500(a)

- | | | |
|---------------------------------------|---|---|
| <input type="checkbox"/> | 71. Inspect Oily Water Separator (OWS) | 33 CFR 155.380
MARPOL I/14 |
| <input checked="" type="checkbox"/> T | 72. Inspect handrails, bulwarks, storm rails & fall overboard prevention procedures | 46 CFR 144.800
46 CFR 144.810 |
| <input type="checkbox"/> | 73. Inspect freeing ports and scuppers | 46 CFR 137.325
46 CFR 144.135 |
| <input checked="" type="checkbox"/> | 74. Inspect air ports, dead covers and vent openings | 46 CFR 144.605 |
| <input type="checkbox"/> | 75. Inspect fuel tank vents | 46 CFR 143.265(c) |
| <input type="checkbox"/> | 76. Inspect towing gear for towing along side or pushing ahead | 46 CFR 140.801 & .805
46 CFR 140.820 |
| <input type="checkbox"/> | 77. Inspect terminal gear - towing astern | 46 CFR 140.801 & .805
33 CFR 164.74 |
| <input type="checkbox"/> | 78. Inspect emergency procedures | 46 CFR 140.801(c) |
| <input type="checkbox"/> | 79. Inspect hull for defects during an underwater survey | 46 CFR 137.335(b)
NVIC 01-89 Encl. 1/2.a |
| <input type="checkbox"/> | 80. Inspect steel and aluminum hulls | 46 CFR 144.200
46 CFR 144.205 |
| <input type="checkbox"/> | 81. Inspect hull markings | 46 CFR 144.160
46 CFR 67.120 |
| <input type="checkbox"/> | 82. Inspect main propulsion propeller(s) | 46 CFR 137.330
46 CFR 144.200 |
| <input type="checkbox"/> | 83. Inspect tailshaft(s) and stern bearing(s) | 46 CFR 137.300
46 CFR 137.330(a)(2) |
| <input type="checkbox"/> | 84. Inspect rudder installation | 46 CFR 137.330 & 143.550
ABS 3-2-14/1 |
| <input type="checkbox"/> | 85. Inspect hull appendages | 46 CFR 137.220/.330
ABS 7-4-1/1 |
| <input type="checkbox"/> | 86. Inspect non-propulsion thruster(s) | 46 CFR 137.330
ABS 7-4-1/1 & 7-9-6/1.3 |
| <input type="checkbox"/> | 87. Verify confined spaces are safe for entry | 29 CFR 1915.12(f)
CIM 5100.47A 13.B.3 |
| <input type="checkbox"/> | 88. Inspect vessel's internal structures | 46 CFR 137.330(b)
46 CFR 137.300(a) |
| <input type="checkbox"/> | 89. Evaluate structural repair proposals | 46 CFR 137.330(a)(1)
NVIC 07-68 |
| <input type="checkbox"/> | 90. Verify welder is qualified to perform repair work | 46 CFR 144.200
46 CFR 144.205 |
| <input type="checkbox"/> | 91. Inspect fit-up | 46 CFR 144.200 & .205
NVIC 07-68 V |
| <input type="checkbox"/> | 92. Inspect back gouge | ABS 2-4-1/5.9
NVIC 07-68 V(G)(2) |
| <input type="checkbox"/> | 93. Inspect welds | ABS 2-4-1/5.15.1
MSM II/A.5 |
| <input type="checkbox"/> | 94. Issue deficiencies | 46 CFR 137.200
MSM II/A.2.C.4.b |
| <input checked="" type="checkbox"/> T | 95. Issue/Endorse vessel certificates | 46 CFR 136.200
46 CFR 136.212(c) |



96. Complete MISLE Activity

MSM I/12.G.2.a



97. Verify deficiency corrections or referred to TPO

MSM II/A.2.C.4

Section 3: Appendices

Confined Space Entry Checklist

Sources for Policy

- COMDTINST M5100.47, Chapter 6, change 11
- MSM Vol. 1, Chapter 10 & Appendix A, C, D to chap. 10
- MSM Vol. 2 Ch. 1, Section D, Chapter 6
- 29 CFR 1915, Part B

A Confined Space for the purpose of this checklist is:

A space that possess all of the following three distinct characteristics –

1. Is large enough and so configured that an employee can bodily enter & perform assigned work;
2. Has limited or restricted means for entry or exit; and
3. Is not designed for continuous employee occupancy

Hazards associated with confined space entry

- Oxygen deficient or enriched atmosphere
- Flammable atmosphere
- Toxic atmosphere
- Extreme temperature (hot or cold)
- Engulfment hazard (such as grain, coal, sand, gypsum or similar material)
- Extreme noise
- Slick / wet surfaces & tripping hazards
- Falling objects
- Potential for rapidly changing atmosphere

USCG Confined Space Entry Requirement

A certified Marine Chemist **shall** conduct the initial inspection & certify all confined spaces on merchant vessels “Safe for Workers” before entry by USCG personnel.

In rare circumstances, if a Marine Chemist is not available, the OCMI may designate a USCG Competent Person to certify a confined space “Safe for Workers”

IMMEDIATELY LEAVE ANY CONFINED SPACE IF:

- A personal monitor alarms;
- You feel dizzy or lightheaded;
- The forced air ventilation stops or is apparently ineffective; or
- If you sense any unexpected chemical through smell or dermal sensation that concerns you. This is a judgment call; however, you should depart any time there is a burning sensation in your lungs or you experience a shortness of breath. Any of these sensations may indicate a life threatening situation and you must react promptly to avoid injury.

Note: Climbing (other than on ladders) shall be limited to 5ft.

Steps to Take After Entry for All Confined Spaces

- Immediately contact your chain of command if you left a confined space for any of the reasons noted above. Do not reenter any confined space until notification of appropriate senior personnel and direction from your supervisor is obtained.
- Report any inconsistencies in the marine chemist certificate or competent person log to your supervisor and follow-up with a letter to Commandant CG-1134 via your District (industrial hygienist).
- In the event of overexposure, personnel should be evacuated to appropriate medical facilities by the most expeditious means. Medical personnel should be provided with all known information on the suspected exposure, including concentration and duration of exposure. This should include the most probable route of exposure. Also provide the medical authority with the phone number to American Toxic Substance and Disease Registry (ATSDR).

Operational Risk Assessment

- Discussed Unit's Operational Risk Procedures and Emergency Contacts.

Risk Assessment Concerns:

A large, empty rectangular box with a black border, intended for writing or drawing risk assessment concerns.

Emergency Contacts:

A large, empty rectangular box with a black border, intended for listing emergency contacts.

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	bbbl/LT	m ³ /t	bbbl/m ³	bbbl/t			
Freshwater	6.40	1.00	6.29	6.29			
Saltwater	6.24	.975	6.13	5.98			
Heavy 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 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 ³	1 psi	= .06895 Bar = 2.3106 ft of water			
Temperature: Fahrenheit = Celsius ($^{\circ}\text{F} = 9/5 \text{ }^{\circ}\text{C} + 32$ and $^{\circ}\text{C} = 5/9 (\text{ }^{\circ}\text{F} - 32)$)							
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: Bars = Pounds per square inch							
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			