



**ACS.CoNGLP1 B
SAFETY ASSESSMENT CRITERIA
INITIAL & RE-ASSESSMENT
DOMESTIC**

**NATURAL GAS TO LPG
BOATS**

CoNGLP1 B**INITIAL & RE-ASSESSMENT****Introduction**

Comprises:

- 3(c). LPG cylinder location, safety and sizing
4. Ventilation (for appliances)
5. Installation of pipework and fittings
12. Chimney Standards
13. Chimney inspection and testing
15. Re-establish existing gas supply and relight appliances.

CoNGLP1 B can only be awarded when the Candidate holds CoNGLP1.

CBs may adopt Competence and Criteria numbering different to that used in this document.

CB documentation may adopt wording for criteria different to that used in this document, provided the meaning is unaffected.

Range

All LPG fittings in boats.

Pre-requisites***Initial***

CoNGLP1.

Re-assessment

CoNGLP1 + CoNGLP1 B.

References and normative documents

MIs.

All relevant documents as listed in the Legislative, Normative & Informative Document List (LINDL), inc.:

- PD 54823: 2016
- BS EN ISO 10239: 2014
- HSL56
- GIUSP.

Where a reference point (REF) is listed in this criteria this is only a guide to where the criteria could be resourced; therefore, the REF may not be exhaustive.

ACS.SMB. 004.ACRND identifies Normative Documents that should be held by ACs.

Abbreviations

AC. Assessment Centre

CB. Certification Body

I. Initial

MIs. Manufacturer's/manufacturers' instructions

R. Re-assessment

Ref. Reference.

3(b). Cylinder location and safety requirements

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	location and safety:			
(i)	installation, location and protection for Propane and Butane cylinders		✓	
(ii)	construction inc. ventilation, of compartments, lockers and internal housings		✓	
(iii)	safety precautions for storage and use of cylinders		✓	
2	Requirements for installation of means to test the LPG system for leakage (e.g. bubble leak tester/pressure gauge)		✓	✓

3(c). Supply pressures - operation and positioning of emergency isolation, flow control and valves for cylinders

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1	Operation and positioning of pressure regulation devices for cylinders		✓	✓
2	Over pressure protection & conformity to BS EN 16129: 2013		✓	✓
3	Pressure regulation devices more than ten years old		✓	✓
4	external manual output pressure regulation devices		✓	✓

4. Ventilation for appliances

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	siting of ventilation (hull, windows, decks and ducted) direct to outside air, or via series air vents		✓	
2.	installation of ventilation grilles and vents		✓	
3.	types of grilles and vents		✓	
4.	calculating ventilation for combustion air (PC for Re-assessment)		✓	✓
5.	New and existing appliances installed in petrol engine spaces		✓	✓
6.	calculating ventilation for cupboards and compartments for open, balanced and fan assisted appliances,		✓	✓
7.	calculating ventilation for combustion for multi-appliance installations		✓	✓
a.	Minimum ventilation requirements for closed compartments		✓	✓
8.	requirements for flueless appliances (unflued)		✓	
9.	positioning of trunked ventilation into a space containing a gas appliance(s)		✓	
10.	location and ventilation of gas cylinder lockers and housings		✓	✓
11.	protection for low level appliances (gas detection and interlocks)		✓	✓
12.	siting of ventilation through engine compartments		✓	✓

5. Installation of pipework and fittings. Range of pipe sizes: 4mm to 22mm

PERFORMANCE CRITERIA		REF	I	R
1.	join soft copper pipe using appropriate compression fittings, methods and agents		✓	✓
KNOWLEDGE AND UNDERSTANDING				
1.	copper pipe and fittings standards suitability and use - hard soldering		✓	✓
1a	Wall thickness requirements for solid drawn copper/stainless steel pipework		✓	✓
2.	sleeving pipework through bulkheads		✓	
3.	pliable corrugated stainless-steel tubing (PCT) and fittings, standards, suitability and use		✓	✓
x4.	jointing copper and stainless-steel pipework		✓	✓
4a	Correct use of self-sealing connections i.e. bayonets		✓	✓
4b	the requirements for shut off valves, solenoid valves and their location		✓	✓
5.	installation of pipework passing through engine compartments		✓	
6.	precautions and protection when installing pipework		✓	
7	requirements for pipework when in direct contact with metallic parts of the craft structure		✓	✓

12.Chimney/ Flueing Standards for appliances

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1. open gas flue systems: natural draught:				
(i)				
(ii)	flue requirements, termination positions for open flues before May 1999 (refuelling)		✓	✓
(iii)	flueing for appliances installed in boats after May 1999		✓	✓
(iv)	specific flue heights and termination positions for open and closed flues		✓	✓
(v)	risk assessments when replacing existing open flue water heaters		✓	✓
(vi)	Requirements for non -room-sealed refrigerators		✓	✓
2. room sealed:				
(i)	room sealed flue construction		✓	✓
(ii)	restrictions for room sealed termination positions (PD 54823 and BS EN ISO 10239)		✓	✓
(iii)	requirements and restrictions for room sealed appliance termination positions/ appliances		✓	✓

N.B. Additional gas flue requirements for appliances should be assessed in conjunction with the appropriate appliance MIs.

13. Flue testing

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	open flue testing procedures for boats		✓	
1.	procedures if flues show signs of spillage		✓	

15. Re-establish existing gas supply and relight appliances

PERFORMANCE CRITERIA		REF	I	R
1.	check appliances are designed for a marine environment, CE marked and are of correct type		✓	
KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	adjacent structures in contact with any gas appliance		✓	✓
2.	combustible materials adjacent to appliances that may be subject to a temperature.		✓	✓
3.	Proximity and flammability of materials to cooking appliances are found MI's & new should conform to ISO 9094		✓	✓
4.	information for users		✓	✓
5.	cooking appliance restrictions when used with integral LPG cartridges		✓	✓
6.	Commissioning and maintenance tests		✓	✓