



**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:	BS EN ISO 10239			
(i) installation, location and protection	8.1 8.2 & 8.3		√	
(ii) construction inc. ventilation, of compartments, lockers and internal housings	8.2 - 8.5		√	
(iii) safety precautions for storage and use	8.6-8.7		√	
2 Requirements for installation of means to test the LPG system for leakage (e.g. bubble leak tester/pressure gauge)	BS EN ISO 10239. 4.5		√	√

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	BS EN ISO 10239 5.6		√	√
2 Over pressure protection & conformity to BS EN 16129: 2013	BS EN ISO 10239 5.2		√	√
3 Pressure regulation devices more than ten years old	PD 54823:2016 , Section 5		√	√
4 external manual output pressure regulation devices	BS EN ISO 10239 5.4		√	√

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	PD 54823:2016 Section 13 & Annex C		√	
2. installation of ventilation grilles and vents	PD 54823:2016 Section 13 & Annex C		√	
3. types of grilles and vents	PD 54823:2016 Section 13 & Annex C		√	
4. calculating ventilation for combustion air (PC for Re-assessment)	PD 54823:2016 Annex C & BS EN ISO 10239 Annex B		√	√
5. New and existing appliances installed in petrol engine spaces	PD 54823:2016 section 7		√	√
6. calculating ventilation for cupboards and compartments for open, balanced and fan assisted appliances,	PD 54823:2016 Annex C		√	√
7. calculating ventilation for combustion for multi-appliance installations	PD 54823:2016 Annex c		√	√
a. Minimum ventilation requirements for closed compartments	PD 54823:2016 Annex C & MI's		√	√
8. requirements for flueless appliances (unflued)	PD 54823:2016 Annex C		√	
9. positioning of trunked ventilation into a space containing a gas appliance(s)	BS EN ISO 10239 7.4.2.		√	
10. location and ventilation of gas cylinder lockers and housings	BS EN ISO 10239 8.5		√	√
11. protection for low level appliances (gas detection and interlocks)	BS 6172 :2010 7.6		√	√
12. siting of ventilation through engine compartments	BS 54823 Annex C		√	√

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	BS EN ISO 10239 6.2.4		√	√
KNOWLEDGE AND UNDERSTANDING				
1. copper pipe and fittings standards suitability and use - hard soldering	BS EN ISO 10239 6.4.1		√	√
1a Wall thickness requirements for solid drawn copper/stainless steel pipework	BS EN ISO 10239 6.2.1		√	√
2. sleeving pipework through bulkheads	6.5.4 6.5.6 6.5.7		√	

3.	pliable corrugated stainless steel tubing (PCT) and fittings, standards, suitability and use	BS EN ISO 10239 6.2.1	√	√
4.	jointing copper and stainless steel pipework	BS EN ISO 10239 6.2.4	√	√
4a	Correct use of self-sealing connections i.e. bayonets	PD 54823:2016 6.2	√	√
4b	The requirements for shut off valves, solenoid valves and their location	6.6	√	√
5.	installation of pipework passing through engine compartments	6.2.2 & 6.2.3	√	
6.	precautions and protection when installing pipework	6.5.2 & 6.5.3	√	
7	requirements for pipework when in direct contact with metallic parts of the craft structure	BS EN ISO 10239. 6.5.1	√	√

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)	PD 54823: Section 13	√	√
(iii)	flueing for appliances installed in boats after May 1999	PD 54823: Section 13	√	√
(iv)	specific flue heights and termination positions for open and closed flues	BS EN ISO 10239:2014 Section 13	√	√
(v)	risk assessments when replacing existing open flue water heaters	PD 54823:2016 Section 7	√	√
(vi)	Requirements for non -room-sealed refrigerators	PD 54823:2016 Section 7		
2. room sealed:				
(i)	room sealed flue construction	BS EN ISO 10239 Section 13 & MI's	√	√
(ii)	restrictions for room sealed termination positions (PD 54823 and BS EN ISO 10239)	BS EN ISO 10239 13.6	√	√
(iii)	requirements and restrictions for room sealed appliance termination positions/ appliances	BS EN ISO 10239 - IGE/G/6 and MIs	√	√

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	PD 54823:2016 Annex F	√	
1.	procedures if flues show signs of spillage	GIUSP	√	

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	BS EN ISO 10239 7.1	√	
KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	adjacent structures in contact with any gas appliance	PD 54823 Section 7.7	√	√
2.	combustible materials adjacent to appliances that may be subject to a temperature .	BS EN ISO 10239 7.6	√	√
3.	Proximity and flammability of materials to cooking appliances are found MI's & new should conform to ISO 9094	BS EN ISO 10239 7. 10 & M's	√	√
4.	information for users	PD 54823 Section 12	√	√
5.	cooking appliance restrictions when used with integral LPG cartridges	PD 54823:2016 Annex A & BS EN ISO 10239 Annex D	√	√
6.	Commissioning and maintenance tests	PD 54823 Section 14	√	√