



**ACS.CCLP1 B
SAFETY ASSESSMENT CRITERIA
INITIAL & RE-ASSESSMENT
DOMESTIC LPG
BOATS**

CCLP1 B**INITIAL & RE-ASSESSMENT****Introduction**

Tests gas safety competence in core domestic LPG for boats.

CCLP1 B can only be awarded when the Candidate holds CCLP1.

Comprises:

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

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 on boats.

Pre-requisites**Initial**

CCLP1.

Re-assessment

CCLP1 + CCLP1 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.003.ACRND identifies Normative Documents that should be held by ACs.

Abbreviations

AC. Assessment Centre

CB. Certification Body

B. Boats

I. Initial

MIs. Manufacturer's/manufacturers' instructions

R. Re-assessment

Ref. Reference.

3(b). Cylinder location and safety

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	location and safety of cylinders:	BS EN ISO 10239		
(i)	installation, location and protection for Propane and Butane cylinders	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 of cylinders	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 5.5 to 5.7	√	√
2	Over pressure protection & conformity to BS EN 16129 :2013	BS EN ISO 10239 5.2 & PD 54823:2016 , Section 5	√	√
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

PERFORMANCE CRITERIA		REF	I	R
1.	calculate free area of a selection of air vents	PD 54823:2016 Annex C or BS EN ISO 10239 Annex B	√	√
2.	identify correct and incorrect types of air vents and grilles e.g. fly screens	Annex C	√	√
3.	identify inadequate ventilation	GIUSP	√	√
KNOWLEDGE AND UNDERSTANDING (these criteria are PC for re-assessment)		REF	I	R
1.	siting of ventilation (hull, windows, decks and ducted) direct to outside air, or via series air vents	BS EN ISO 10239 Section 9 PD 54823:2016 Section 13 & Annex C	√	√
2.	Minimum ventilation requirements	PD 54823:2016 Annex C & BS EN ISO 10239 Annex B	√	√
3.	installation of ventilation grilles and vents	PD 54823:2016 Section 13 & Annex C	√	
4	types of grilles and vents	PD 54823:2016 Section 13 & Annex C	√	
5.	additional ventilation e.g. extractor fans, cooker hoods, dryers etc.	BS 6172 : 2010 14.6	√	
6.	labels and notices including those required for non-room- sealed appliances	PD 54823:2016 Section 7 & Annex E	√	√
7.	New and existing appliances installed in petrol engine spaces	PD 54823 section 7	√	√
8.	calculating ventilation for closed compartments	PD 54823:2016 Annex C & MI's	√	√
9.	calculating ventilation for cupboards and compartments for open, balanced and fan assisted flue appliances	PD 54823:2016 Annex C	√	√
10.	calculating ventilation for combustion air for multi-appliance installations	Annex C	√	√
11.	requirements for flueless appliances (unflued)	PD 54823:2016 Annex C	√	
12.	Requirements and positioning of trunked ventilation into a space containing a gas appliance(s)	BS EN ISO 10239. 7.4.2	√	
13.	location and ventilation for gas cylinder lockers and housings	8.5	√	√
14.	protection for low level appliances (gas detection and interlocks)	BS 6172 : 2010 7.6	√	√
15.	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 with appropriate compression fittings, methods and agents	BS EN ISO 10239 6.2.4	√		
KNOWLEDGE AND UNDERSTANDING		REF	I	R	
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.	pliable corrugated stainless steel tubing (PCT) and fittings, standards, suitability and use		√	√	
3.	jointing copper and stainless steel pipework	BS EN ISO 10239 6.2.4	√	√	
4.	restrictions on use of union, compression and capillary fittings	BS EN ISO 10239 6.2.5 6.2.6 6.4.2	√	√	
4a.	Correct use of self-sealing connections i.e. bayonets	PD 54823:2016 6.2	√	√	
4b	The requirements for shut off valves or solenoid valves and location/s	6.6	√	√	
5.	sleeve pipework through bulkheads	BS EN ISO 10239 6.5.4 6.5.6 6.5.7	√		
6.	pipework passing through engine compartments		6.2.2 & 6.2.3	√	
6a	pipework passing through engine compartments prior to May 1999		PD 54823:2016 6.2 (note 4)	√	
7.	precautions and protection when installing pipework	6.5.2 & 6.5.3	√	√	
8	requirements for pipework when in direct contact with metallic parts of the craft structure	BS EN ISO 10239 6.5.1	√	√	
9	Design guide for pressure drops and pipe sizing exercise	PD 54823:2016 Annex B	√	√	

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 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: natural draught:			
(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 appliances termination positions /appliances	BS EN ISO 10239 - IGE/G/6 and MIs	√	√
(iv)	room sealed flue terminal guards	13.7	√	√

13. Flue testing

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	open flue testing procedures	PD 54823:2016 Annex F	√	
2.	procedures if flue shows 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	√	√
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 & should conform to ISO 9094	BS EN ISO 10239 7. 10 & M's	√	√
4.	information for users	PD 5482 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	√	√