



**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:
- BS EN ISO 10239:
- 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:			
(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

PERFORMANCE CRITERIA		REF	I	R
1.	calculate free area of a selection of air vents		✓	✓
2.	identify correct and incorrect types of air vents and grilles e.g. fly screens		✓	✓
3.	identify inadequate ventilation		✓	✓
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		✓	✓
2.	Minimum ventilation requirements		✓	✓
3.	installation of ventilation grilles and vents		✓	
4.	types of grilles and vents		✓	
5.	additional ventilation checks e.g. extractor fans, cooker hoods, dryers etc.		✓	
6.	labels and notices including those required for non-room- sealed appliances		✓	✓
7.	New and existing appliances installed in petrol engine spaces		✓	✓
8.	calculating ventilation for closed compartments		✓	✓
9.	calculating ventilation for cupboards and compartments for open, balanced and fan assisted flue appliances		✓	✓
10.	calculating multi-appliance Installations (open flue and flueless appliances within same room/space)		✓	✓
11.	requirements for flueless appliances (unflued)		✓	
12.	Requirements and positioning of trunked ventilation into a space containing a gas appliance(s)		✓	
13.	location and ventilation for gas cylinder lockers and housings		✓	✓
14.	protection for low level appliances (gas detection and interlocks)		✓	✓
15.	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 with appropriate compression fittings, methods and agents		✓	
KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	copper pipe and fittings, standards, suitability and use - hard soldering		✓	✓

1a	Wall thickness requirements for solid drawn copper/stainless steel pipework		✓	✓
2.	pliable corrugated stainless-steel tubing (PCT) and fittings, standards, suitability and use		✓	✓
3.	jointing copper and stainless-steel pipework		✓	✓
4.	restrictions on use of union, compression and capillary fittings		✓	✓
4a.	Correct use of self-sealing connections i.e. bayonets		✓	✓
4b	The requirements for shut off valves or solenoid valves and location/s		✓	✓
5.	sleeve pipework through bulkheads		✓	
6.	pipework passing through engine compartments		✓	
6a	pipework passing through engine compartments prior to May 1999		✓	
7.	precautions and protection when installing pipework		✓	✓
8	requirements for pipework when in direct contact with metallic parts of the craft structure		✓	✓
9	Design guide for pressure drops and pipe sizing exercise		✓	✓

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 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: natural draught:			
(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 appliances termination positions /appliances		✓	✓
(iv)	room sealed flue terminal guards		✓	✓

13. Flue testing

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	open flue testing procedures		✓	
2.	procedures if flue shows 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 & should conform to ISO 9094		✓	✓
4.	information for users		✓	✓
5.	cooking appliance restrictions when used with integral LPG cartridges		✓	✓
6.	Commissioning and maintenance tests		✓	✓