



**ACS.CCLP1 LAV
SAFETY ASSESSMENT CRITERIA
INITIAL & RE-ASSESSMENT
DOMESTIC LPG
LEISURE ACCOMMODATION VEHICLES**

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

Tests gas safety competence in core domestic LPG competencies for LAVs.

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

Comprises:

- 3(b). LPG supply pressures – operation and positioning of emergency isolation, flow control and valves for bulk gas storage vessels
- 3(c). LPG cylinder and vessel location and safety requirements
- 4. Ventilation
- 5. Installation of pipework and fittings
- 12. Chimney Standards
- 13. Chimney inspection and testing
- 14. Installation of open, closed, balanced and fan assisted flue assemblies.

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 fittings in LAVs.

Exclusions

Refillable tank installation

Pre-requisites***Initial***

CCLP1.

Re-assessment

CCLP1 + CCLP1 LAV.

References and normative documents

MIs.

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

- HSL56
- GIUSP
- BS 1949:2011.
- **BS 5482-2:1977**
- **BS 721**

ACS.SMB.003.ACRND identifies Normative Documents that should be held by ACs.

Abbreviations

AC. Assessment Centre
 CB. Certification Body
 ELV. Extra low voltage
 I. Initial
 LAV. Leisure accommodation vehicle
 MIs. Manufacturer's/manufacturers' instructions
 R. Re-assessment
 Ref. Reference
 UPSO. Under-pressure safety cut-off.

3(b). LPG supply pressures - operation and positioning of emergency isolation, flow controls and valves for bulk gas storage vessels

KNOWLEDGE AND UNDERSTANDING	REF	I	R
1. recognition of supply pressures from gas storage vessels: MP stage		√	√
2. operation and positioning of vapour service shut-off valve		√	
3. operation and positioning of first and second stage regulators		√	√
4.			
5.			
6.			
7. identification of causes of under-pressure conditions		√	
8. operation, positioning and visible indicators of UPSOs		√	
9. re-setting UPSOs		√	
10. operation and positioning of limited relief valve		√	
11. advice to consumer on re-setting UPSOs		√	
12. Protection against accidental disconnection of supply		√	√

3(c). LPG cylinder and vessel location, safety and sizing

KNOWLEDGE AND UNDERSTANDING	REF	I	R
1. location and safety of cylinders:			
(i) installation, location and protection of Propane and Butane cylinders		√	
(ii) construction (inc. ventilation) of compartments, lockers and internal housings	BS EN 1949 5.4	√	
(iii) safety precautions for storage and use of cylinders		√	√
(iv) Shielding requirements for cylinder compartments		√	√
(v) ventilation safety precautions for storage of cylinders	BS EN 1949 5.5	√	√
2. location and safety of vessels		√	√
3. marking of common vessels commercially available for single supply		√	√
4. requirements when using two LPG supplies (including labelling)		√	√
5. restrictions for electrical equipment in cylinder compartments:			
(i) only ELV equipment and cables not connecting within compartment allowed		√	√
(ii) not a potential source of ignition		√	√
(iii) protection against mechanical damage		√	√
6. Visual inspection of gas storage tank (non-propulsion)	NCC CoP 306 7.1a	√	√

4. Ventilation

PERFORMANCE CRITERIA	REF	I	R
1. calculate correct 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 installation of inadequate ventilation		√	√
KNOWLEDGE AND UNDERSTANDING (these criteria are PC for re-assessment)	REF	I	R
1. siting of ventilation (wall, window, floor, ceiling and ducted) direct to outside air, or via series air vents	BS EN 721 5.1, 5.2, 5.2.2, 5.2.3	√	√
2. requirements for ventilation (MI's & where appropriate BS EN 1949)		√	
(i) Ventilation exercise for fixed ventilation (BS EN 721. Table 1)	BS EN 721. 5.2.1		
3. installation of ventilation grilles and vents		√	
4. types of grilles and vents		√	
5. additional ventilation e.g. extractor fans, cooker hoods, dryers etc.		√	

6.	labels and notices (inc BS EN 721 Annex A)		✓	✓
7.	calculating ventilation for combustion (BS 5482-2)		✓	✓
8.	calculating ventilation exercise for fixed ventilation (BS EN 721Table 1) combustion	BS EN 721. 5.2.1	✓	✓
9.	calculating ventilation for enclosed spaces - cupboards, compartments for open, balanced and fan assisted flue appliances		✓	✓
10.	calculating ventilation for combustion for multi-appliance installations		✗	✗
10a.	location and ventilation for gas cylinder housings			✗
11.	flueless appliances		✓	
12.	restrictions for use of screens to prevent entry of vermin		✓	
13.	positioning of trunked ventilation into a space containing a gas appliance		✓	
14.	ventilation safety precautions for storage of cylinders		✗	
15.	gas dispersal drains (drop holes)		✓	✓

5. Installation of pipework and fittings (and fuel cells and power generators). Range of pipe sizes: 6 mm to 28 mm

PERFORMANCE CRITERIA		REF	I	R
1.	join copper pipe using appropriate capillary fittings, methods and agents		✓	
2.	join soft copper pipe with appropriate compression fittings, methods and agents		✓	
3.	disconnect LPG cylinder from pipework, observing all safety precautions			✓
4.	attach temporary earth bonding equipment correctly			✓
5.	fabricate copper capillary fitting using appropriate methods and agents			✓
6.	reconnect LPG cylinder			✓
7.	check work carried out is gas tight			✓
8.	purge installation of air			✓
KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	copper pipe and fittings standards suitability and use - hard soldering		✓	
2.	galvanised steel pipe and fittings-standards suitability and use		✓	
3.	jointing and cleaning agents for copper, stainless and galvanised steel pipework		✓	
4.	restrictions on use of union, compression and capillary fittings		✓	
5.	locations where LPG pipework is not to be installed		✓	
6.	installing fuel cells			
7.	installing LPG power generators:			
(i).	sealing and ventilating and fire protecting generator compartment		✓	✓
(ii).	accessibility of controls		✓	✓

12. Chimney Standards

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	open gas flue systems: natural draught:			
(i)	Flue system Installations requirements termination positioning for open flues: pre December 2000	BS EN 1949: 2011 11.1	✓	✓
(ii)	termination positions for open flues after December 2000 – Additional expectations for flexible flue systems.	BS EN 1949: 2011 11.1	✓	✓
(iii)	termination positions for open flues after February 2003 Flue shielding and routing requirements.	BS EN 1949: 2011 11.1	✓	✓
(iv)	Additional requirements for closed flue systems: natural draught: specific flue heights and termination positions for closed flues	MI's	✓	✓
2.	balanced & fanned flue: natural draught: Flue Terminations			
(i)	restrictions for balanced flue termination positions pre December 2000	BS EN 1949: 2011 11.2	✓	✓
(ii)	restrictions for balanced flue termination positions after December 2000		✗	✗
(iii)	restrictions for balanced flue terminal positions after February 2003		✗	✗
(iv)	balanced requirements for flue terminal guards	MI's	✓	
3.	room sealed, fanned draught: restrictions on lengths, bends etc.	MI'S	✓	
4.	condensing flues: condensate disposal position and termination		✗	
5.	Underfloor discharge arrangements	BS EN 1949: 2011 11.2	✓	✓
6.	Additional restrictions for flue terminations \leq >30 g/h LPG in relation to Ventilators.	BS EN 1949: 2011 11.2 Fig 9	✓	✓
7.	Automatic shut off devices for flue terminations \leq >30 g/h LPG in relation to windows	BS EN 1949: 2011 11.2	✓	✓
8.	flue terminations \leq >30 g/h LPG in relation to windows	BS EN 1949: 2011 11.2 Fig 10		
9.	flue terminations in relation to refuelling system, breather tank , ventilators e.t.c.	BS EN 1949: 2011 11.2	✓	✓

13. Chimney inspection and testing

PERFORMANCE CRITERIA	REF	I	R
1. inspect flue visually to UKLPG COP 21: identify closed flue defects		✓	✓
2. carry out closed flue spillage test		✓	✓
3. Inspection and accessibility of flues	BS EN 1949: 2011 11.5	✓	✓

14. Installation of open, closed, balanced and fan assisted flue assemblies

PERFORMANCE CRITERIA	REF	I	R
1. fan assisted: number of bends within flue length to MIs		✓	
KNOWLEDGE AND UNDERSTANDING	REF	I	R
1. condensing appliance flues		✓	
2. condensate disposal position and termination	MI's	✓	✓