Strategic Management Board

ACS.CCLP1 MC
SAFETY ASSESSMENT CRITERIA
INITIAL
DOMESTIC LPG
MOBILE CABINET HEATERS

ACS. CCLP1 MC & CABLP1
SAFETY ASSESSMENT. RE-ASSESSMENT
DOMESTIC LPG
MOBILE CABINET HEATERS

CCLP1 MC & CABLP1	INITIAL & RE-ASSESSMENT

Introduction

This Core assessment now incorporates the criteria for combustion performance analysis for delivery from 1st April 2012. This packaged Assessment shall be delivered from 1st April 2012 and shall be downloaded to the national database using the assessment codes CCLP1 MC **only.** Unlike CCN1 and CCLP1, this assessment **does not** cover the full competence criteria of CPA1 and, hence, CPA1 shall not be downloaded.

This Limited Scope Assessment covers the core competencies required for LPG mobile cabinet heaters (CCLP1 MC), and the specific competencies to commission service, repair and break down domestic butane gas fired mobile cabinet heaters (CABLP1).

Tests gas safety competence in core domestic LPG mobile cabinet heaters.

Comprises:

1. Gas safety legislation and Standards
2. Gas emergency actions and procedures
3. Products and characteristics of combustion (inc. combustion performance analysis)
3(a). Characteristics of LPG
3(b). Cylinder location, safety requirements and sizing
3(c). Supply pressures
4. Ventilation
5. Installation of pipework and fittings
8. Unsafe situations, use of emergency notices and warning labels
16. Inspect, test, commission and maintain 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 gas fittings used in mobile cabinet heaters and single bottle supply leisure equipment.

Pre-requisites

Initial

None.

Re-assessment

CCLP1 MC + CABLP1.

For Competence 3.17 K&U where CPA1 is not held, or CCLP1 MC sat from 1st April 2012 is not held, or CCCN1 or COCN1 or CCLNG1 sat from 1st April 2012 (for non-domestic premises only) is not held, the Initial criteria have to be met when undertaking Re-assessment.

References and normative documents

MIs.

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

- HSL56
- GIUSP.

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

Abbreviations

AC. Assessment Centre
CB. Certification Body
FSD. Flame supervision device
I. Initial
MIs. Manufacturer's/manufacturers' instructions
OP. Operating pressure
OQ. Oral questioning
R. Re-assessment
Ref. Reference.

1. Gas safety legislation and standards

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	**HSL56:**			
(i)	Reg.2 General interpretation and application 2(1) to 2(5)		√	
(ii)	Reg.3 Qualification and supervision 3(1),(2),(3),&(6)		√	
(iii)	Reg.4 Duty on employer		√	
(iv)	Reg.5 Materials and workmanship 5(1) to (3)		√	
(v)	Reg.6 General safety precautions 6(1) to (9)		√	
(vi)	Reg.7 Protection against damage 7(1) to (3)		√	
(vii)	Reg.8 Existing gas fittings 8(1) to (3)		√	
(viii)	Reg.25 Interpretation of Part E		√	
(ix)	Reg.26 Gas appliances - safety precautions 26(1) & (3) to (9)		√	
(x)	Reg.35 Duties of employers and self-employed persons		√	
(xi)	Reg.36 Duties of landlords 36(1) to (12)		√	

2. Gas emergency actions and procedures

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	dealing with gas leakage with fire: safety/fire precautions for cylinders		√	
2.	**dealing with gas leakage without fire:**			
(i)	specific gravity and its effect in relation to air e.g. search techniques		√	
(ii)	preventing/reducing dangerous concentrations of gas in atmosphere and at low level		√	
3.	advice to occupants		√	
4.	HSL56: Reg.9 Emergency controls 9(5)		√	

3. Products and characteristics of combustion

PERFORMANCE CRITERIA		REF	I	R
1.	**visually inspect flame pictures of burners and identify those indicating:**			
(i)	complete combustion		√	√
(ii)	incomplete combustion		√	√
2.	**identify incomplete combustion:**			
(i)	around appliance location		√	
(ii)	in appliance		√	√
3.	**CO detectors and indicators:**			
(i)	identify detectors and indicators		√	√
(ii)	installation – locations		√	√
(iii)	commissioning and maintenance of detectors (audible, readable, visual)		√	√
4.	**Combustion performance analysis:**			
(i)	inspect appliance for combustion performance testing to ensure installation, flueing and ventilation are to MIs		√	√
(ii)	inspect appliances for obvious signs of damage and factors that may affect combustion performance		√	√
(iii)	check OP and/or heat input of appliance		√	√
(iv)	light appliance and visually inspect combustion performance		√	√
(v)	check analyser is suitable, correctly assembled and calibrated		√	√
(vi)	select correct type of sampling probe		√	√
(vii)	turn on analyser and prepare for use to MIs		√	√
(viii)	correctly position probe for sampling products		√	√
(ix)	adjust position of probe to obtain highest steady value of CO_2 or lowest steady		√	√

	value of O_2 for each appliance			
(x)	read and record CO/CO_2 ratio		√	√
(xi)	adjust and re-test appliance if CO/CO_2 ratio levels are too high		√	√
KNOWLEDGE AND UNDERSTANDING		**REF**	**I**	**R**
1.	main constituents of complete and incomplete combustion		√	
2.	air for complete combustion		√	
3.	**causes of appliance incomplete combustion at:**			
(i)	burner		√	
(ii)	combustion space		√	
(iii)	catalytic bed		√	
4.	symptoms of CO poisoning		√	
5.	advice to a person who describes symptoms of being affected by products of combustion or when indicator/detector has activated		√	√
6.	other sources of CO & CO_2 in dwellings		√	√
7.	ambient levels of CO in atmosphere		√	√
8.	levels of CO within dwellings and effect on electronic detectors		√	√
9.	causes of activation of CO detectors and indicators		√	√
10.	ambient levels of CO_2 in atmosphere		√	√
11.	critical levels of CO_2 that could cause vitiation affecting combustion process		√	√
12.	movement of products of combustion within properties and its effects		√	√
13	advice to be given when a CO detector has activated	BS7967 2015 7.2	√	√
14.				
15.	manufacturing standards for electronic CO detectors (alarms)		√	√
16.	identification of unsafe situation where combustion products could enter premises		√	√
17.	**Combustion performance analysis:**			
(i)	re-testing appliance when new components have been fitted		√	
(ii)	unsafe situation category for flued appliance that fails test	GIUSP Ed 7.1 Situation Table 7.6	√	
(iii)	unsafe situation category for flueless appliance that fails test		√	
(iv)	understanding of action levels for gas appliances		√	
(v)	actions if CO/CO_2 ratio remains above suitable performance levels after adjustment		√	
(vi)	types of portable combustion analysers		√	√

3(a) Characteristics of LPG

KNOWLEDGE AND UNDERSTANDING		**REF**	**I**	**R**
1.	types of commercial LPG (propane, butane)		√	
2.	storage pressures for both gas types and its relation to temperature		√	
3.	specific gravity of LPG vapour and its effect in relation to air and Natural Gas		√	
4.	vaporisation of LPG liquid and off-takes - effects of temperature		√	
5.	limits of flammability		√	
6.	calorific value		√	

3(b). Cylinder location, safety requirements and sizing

KNOWLEDGE AND UNDERSTANDING			**REF**	**I**	**R**
1.	installation			√	
2	location			√	
3.	internal housing			√	
4.	safety precautions for storage and use			√	
5.	sizes and marking available and recommended off-take to match appliance demand			√	
6.	operation and positioning of cylinder valve			√	
7.	**HSL56:**				
(i)	Reg.6 General Safety Precautions 6(7)	These can be cross-referenced if required		√	
(ii)	Reg.6 General Safety Precautions 6(8)			√	
(iii)	Reg.6 General Safety Precautions 6(9)			√	

3(c) Supply pressures

KNOWLEDGE AND UNDERSTANDING		**REF**	**I**	**R**
1.	recognition of supply pressures from gas storage cylinders: HP Stage		√	
2.	**operation and positioning of gas storage cylinder fittings:**			
(i)	pressure relief valve		√	
(ii)	cylinder valve		√	
3.	types and sizing of gas regulators		√	

4.	HSL56: Reg.14 Regulators 14 (2) & (7)		√	
5.	min. and max. acceptable outlet pressures for BS 3016 and EN 12864 regulators		√	√
6.	lock up pressure for BS 3016, EN 12864 and EN 13785 regulators		√	√
7.	identification of causes of over pressure conditions		√	√

4. Ventilation

* These criteria are K&U for Initial but PC for Re-assessment

PERFORMANCE CRITERIA	REF	I	R
1. calculate free area of selection of air bricks (inc. terracotta types) and vents		√	√
2. identify inadequate ventilation		√	√
KNOWLEDGE AND UNDERSTANDING	**REF**	**I**	**R**
1. ventilation requirements		√	
2. siting of ventilation (wall, window, floor, ceiling and ducted) direct to outside air, or via series air vents		√	
3. installing ventilation grilles and vents*		√	
4. types of grilles and vents		√	
5. calculating ventilation for combustion in permanent dwellings*		√	√
6. calculating ventilation for combustion for multi-appliance installations*		√	√
7. flueless appliances*		√	√
8. restrictions on use of screens to prevent entry of vermin		√	
9. positioning of ducted ventilation into a space containing gas appliance(s)		√	
10. additional ventilation e.g. extractor fans, cooker hoods, driers etc.		√	
11. labels and notices*		√	√

5. Installation of pipework and fittings. Range of pipe sizes: 6 mm to 12 mm

PERFORMANCE CRITERIA	REF	I	R
1. join threaded pipe joints using appropriate fittings, methods and agents		√	√
2. join threaded pipe using appropriate fittings, methods and agents			√
3. fabricate LP hose using appropriate fittings, clips, methods and agents			√
4. check appliance pipework is gas tight			√
5. purge appliance of air			√
6. identify appliance pipework defects			√
KNOWLEDGE AND UNDERSTANDING	**REF**	**I**	**R**
1. LP hoses and connections - identification of types, condition and date of manufacture		√	
2. restrictions on length of hoses from regulator		√	
3. making and breaking gas connections on appliances		√	
4. HSL56: Reg.22 Testing and purging of pipes 22 (1)		√	

8. Unsafe situations, use of emergency notices and warning labels

PERFORMANCE CRITERIA	REF	I	R
1. identify unsafe situations correctly		√	
2. classify unsafe situations as ID & AR		√	√
3. label unsafe appliance(s) /installation (s) appropriately		√	√
4.			
5. demonstrate procedure for each unsafe installation as GIUSP		√	√
6. complete, explain and issue appropriate warning/advisory notices to appropriate persons		√	√
KNOWLEDGE AND UNDERSTANDING	**REF**	**I**	**R**
1. explain dealing with ID	Fig 1 & 6.1 GIUSP Edition 7.1	√	√
2. explain dealing with AR	Fig 1 & 6.2 GIUSP Edition 7.1	√	√
2a explain dealing with AR installations/appliances when turning off does not remove the risk	Fig 1 & 6.2.2 GIUSP Edition 7.1	√	√
3. explain dealing with situations that do not meet current standards but are not unsafe	Foreword GIUSP Edition 7.1	√	√
4.			
5.			
6. **clearly identify correct notices and labels to be used:**			

(i)	MP gas supply		√	
(ii)	warning notice forms		√	
(iii)	advisory notices – appliance use, appliance shut-off work in progress, electrical bonding, landlords records		√	
7.	situations reportable under RIDDOR: explain reporting to HSE		√	√
8.	HSL56: Reg.34 Use of appliances 34 (1) – (3)		√	
9.	**GIUSP:**			
(i)				
(ii)	scope		√	√
(iii)	gas incidents		√	√

16. Inspect, test, commission and maintain appliances

PERFORMANCE CRITERIA		REF	I	R
1.	record consumer and heater information on an appropriate form		√	√
2.	record data and inspect appliance visually. Check:		√	√
(i)	appliance is designed to operate at 28 mbar on butane			√
(ii)	regulator is marked correctly (BS 3016 (BS ISO 12864 2001), Butane, 28 mbar and date of manufacture) and is in good conidition			√
(iii)	hoses are in good condition and not out of date (within 5 years of manufacture)			√
(iv)	note any damage found to pilots, FSDs, burners, ceramic plaques or catalytic panels, casters, panels or guards etc.			√
(v)	ignition spark is reliable and operates correctly			√
(vi)	pilot shows evidence of being changed if appliance is more than 5 years old (OQ will meet this criteria)			√
(vii)	appliances shows no signs of corrosion or dust/lint deposits			√
3.	identify any missing or defective components and record			√
4.	inspect/check appliance operational gas safety components for correct/safe operation			√
5.	identify and repair a small leak			√
6.	check appliance is gas tight (as per GN2)			√
7.	**commission appliance:**			
(i)	purge appliance of air			√
(ii)	check OP at appliance			√
(iii)	check burners flame pictures, stability and ignition			√
(iv)	check user controls are operating correctly			√
(v)	check safety control devices are operating correctly (FSD drop out time)			√
8.	identify defects on gas safety components			√
9.	fill in and attach appliance service badge			√
10.	explain safe operation and use of appliance			√
11.	explain requirements for vacuum cleaners when used on catalytic heaters			√
12.	explain procedures for dealing with cylinder valve letting by			√