



**ACS.CPA1
SAFETY ASSESSMENT CRITERIA
INITIAL & RE-ASSESSMENT
DOMESTIC.
NATURAL GAS & LPG
COMBUSTION PERFORMANCE
ANALYSIS**

CPA1	INITIAL & RE-ASSESSMENT
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Introduction

For engineers holding CCN1 or CCLP1 (or CCCN1 or COCN1 or CCLNG1 for work in non-domestic premises only). Where these were sat from 1st April 2012, engineers are not required to sit CPA1. Potential Candidates should be advised that combustion performance analysis is now contained in CCN1 and CCLP1. However, if expedient for their purposes, Candidates may sit CPA1 Initial or Re-assessment, as appropriate.

Tests gas safety competence to carry out combustion performance gas analysis required for commissioning at initial installation, re-commissioning after servicing or replacement of parts or the identification of full-service requirements on gas fired appliances.

N.B. This assessment can also be used for appliances of heat input > 70 kW net installed in domestic dwellings in accordance with BS 6798 and BS 5440-1 & - 2.

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.

Appliance range

Gas fired appliances as listed in BS 7967

Pre-requisites

CCN1 or
CoCDN1 or
CCLP1 or
COCN1 or
CCCN1 or
CCLNG1 or
QCF or S/NVQ.

It is not necessary for a Candidate to hold an appliance assessment before sitting CPA1.

Exclusions

This assessment concentrates on gas appliance combustion performance and does not assess in taking atmosphere readings of CO or CO₂ levels in properties.

References and normative documents

Appliance MIs.

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

- HSL56
- BS 6798
- BS 5546
- BS 7624
- BS 6172
- BS 5871 - 1, 2, 3
- BS 5864
- BS 5440 - 1, 2
- BS 5482 - 1, 2,
- BS 54823

- BS 7967
- GIUSP.

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

Abbreviations

AC. Assessment Centre

I. Initial

MIs. Manufacturer's/manufacturers' instructions

OP. Operating pressure

R. Re-assessment

Ref. Reference.

PERFORMANCE CRITERIA		REF	I	R
1.	inspect 3 flue types intended for combustion performance testing to ensure installation, flueing and ventilation are to MIs		✓	✓
2.	inspect appliances for obvious signs of damage and factors that may affect combustion performance		✓	✓
3.	check appliances OP and/or heat input of each appliance		✓	✓
4.	light appliances and visually inspect combustion performance		✓	✓
5.	check combustion performance analyser is suitable, correctly assembled and calibrated		✓	✓
6.	select correct types of sampling probes for appliances		✓	✓
7.	turn on analyser and prepare for use to MIs		✓	✓
8.	correctly position probes for sampling products from appliances to be tested		✓	✓
9.	adjust position of probe to obtain highest steady value of CO ₂ or lowest steady value of O ₂		✓	✓
10.	read and record CO/CO ₂ ratios for each appliance		✓	✓
11.	adjust and re-test appliance if CO/CO ₂ ratio levels are too high		✓	✓
KNOWLEDGE & UNDERSTANDING		REF	I	R
1.	re-testing appliances when new components have been fitted		✓	✓
2.	unsafe situation category for flued appliance that fails test		✓	✓
3.	unsafe situation category for flueless appliance that fails test		✓	✓
4.	additional allowances for CO levels for gas cookers		✓	✓
5.	understanding action levels for gas appliances		✓	✓
6.	if CO/CO ₂ ratio levels remain above suitable performance levels after adjustment, explain actions to be taken		✓	
7.	types of portable combustion gas analysers the differences between CO, CO ₂ direct and indirect readings.		✓	✓