



GQA Level 3 Award for Competence and understanding in the Calibration of Advanced Driver Assistance Systems (ADAS)

Qualification Number 603/6850/0

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GQA, Unit 1, 12 O' Clock Court, Attercliffe Road, Sheffield, S4 7WW
Tel: 01142 720033, Email: Info@gqaqualifications.com,
Website: www.gqaqualifications.com



PERSONAL COMPETENCE SUMMARY

Name		Company/Centre			
Job Title		GQA Registration Number			
UNITS OF COMPETENCE				ASSESSOR SIGNATURE Performance and knowledge assessment completed and supplemented with evidence overtime	DATE
MANDATORY UNITS		Level	Credit		
J/618/5584	Competence and understanding in the Calibration of Advanced Driver Assistance Systems (ADAS)	3	8		
AD02					
		Name and Signature		Date	
Candidate					
Lead Assessor					
Internal Verifier					
EQA					

RELIABLE EVIDENCE: The forms of evidence available include (mark as appropriate)

- | | | | |
|------------------------------|--------------------------|-------------------------|--------------------------|
| Observation in the workplace | ☐ | Assessment of knowledge | ☐ |
| Records of prior experience | ☐ | Witness statement(s) | ☐ |
| Testimonial(s) | ☐ | Photographic evidence | ☐ |
| Work records | ☐ | External testing | ☐ |

Passport Style
Candidate Photo
(Mandatory)

COMPETENCE COMPLETION SIGNATURES

By signing here, the Candidate and Assessor confirm that evidence presented is authentic and that the assessments took place in accordance with the relevant assessment strategy. Details of the assessments and evidence must be recorded in the assessment decision record/summaries at the end of each unit.

Introduction to the Qualification

Who is this Qualification for?

This qualification is aimed at those who need an understanding of ADAS systems and the proof of competence in carrying out calibration activities themselves.

To achieve this qualification the mandatory unit must be fully completed with auditable evidence.

This qualification mandatory unit has a credit value of 8 credits. There is also a qualification from GQA for those who are required to have proof of understanding, but have neither the need or opportunity to have evidence of practical competence of calibration.

Qualifications are now required to indicate the total qualification time (TQT), this is to show the typical time it will take someone to attain the required skills and knowledge to meet the qualification criteria, this qualification has a TQT of 80 hours.

Qualifications are also required to indicate the number of hours of teaching someone would normally need to gain the skills and knowledge to achieve the qualification. These are referred to as Guided Learning Hours (GLH). The GLH for this qualification is 24.

Unit Number	Unit Title	Level	Credit
J/618/5584	Competence and understanding in the Calibration of Advanced Driver Assistance Systems (ADAS)	3	8
AD02			

Achievement of the required credit indicated above will mean the qualification has been completed and GQA will provide the Certificate with the qualification title.

GQA Knowledge Qualification Implementation Requirements covering Centre Approval, Candidate Assessment and ongoing Quality Assurance

This document indicates the requirements of Approved Centres delivering GQA knowledge qualifications and / or units of credit.

Approved Centres should familiarise themselves with the structure and content of the GQA Knowledge Qualification before designing an appropriate course and are also advised to consider the knowledge and understanding requirements of any linked qualifications (e.g S/NVQ's, qualifications, essential skills).

GQA does not itself provide courses of instruction or specify entry requirements. As long as the requirements for the Technical Certificate / Knowledge Qualification are met, trainers / assessors / teachers may design courses of study in any way that they feel best meets the needs and capabilities of the candidates

1. Equality of Opportunity

Equality of access to fair and valid assessment is necessary for all candidates undergoing assessment. This may mean making reasonable adjustments to normal assessment methods for candidates with particular or special assessment requirements. Candidates work patterns should not become a barrier to assessment, the organisation of which may have to be flexible. In the same way, reasonable adjustment arrangements may be necessary for candidates with a disability. For example, a candidate who is unable, through disability, to produce oral or written evidence, may be allowed to use the method they normally use as a substitute for the required form of communication. Reasonable adjustments need to be approved by GQA.

2. Recognised/Approved Assessment Centres

2.1 Individual centres must be approved by GQA to offer specific qualifications and / or units of credit. A centre may be a single organisation or a partnership of two or more organisations. It may operate at a single location or have satellites. For further details see the GQA booklet "Guide to Centre Approval". The Centre Approval process is carried out by a GQA approved EQA. Each Centre must maintain a centre file. It is important to be clear what the steps in the assessment process are:

- plan evidence collection and opportunities for assessment
- collect evidence
- judge evidence
- give feedback to the candidate
- determine whether sufficient evidence has been presented
- make an assessment decision and give feedback to the candidate

NB Any deviation from the norm must be approved by a GQA EQA

2.2 Assessors and Verifiers

All Assessors of candidate performance must be competent, to make qualitative judgements, both in the skills they are assessing and in the assessment of candidates and hold the appropriate Assessor national award. Similarly Internal and EQAs must be competent to make qualitative judgements.

Internal Verifiers are responsible for the quality assurance of the assessment process within a centre. They should have a relevant occupational background, be competent in internal verification and hold the Internal Verifier national award. It is recommended that Internal Verifiers work towards national recognition of assessor competence.

EQAs are responsible for ensuring accurate and consistent standards of assessment across centres, qualifications, units of credit and over time. They should have a relevant occupational background, be competent in External Quality Assurance and hold the EQA national award

GQA will approve and licence all individuals involved in the assessment and verification of its approved qualifications and / or units of credit. Individuals who are working towards the Assessor or Internal Verifier national awards can only be provisionally licensed. The judgement of provisional licence holders will need to be agreed/authorised by a fully qualified and GQA licensed individual who cannot carry out a dual role in relation to a specific candidate.

2.3 Centre Approval, Monitoring Reviews and Quality Assurance

The centre recognition/approval process is the start of a significant part of the awarding body's quality assurance system. The Approval process will begin with an EQA review of centre procedures to ascertain the potential centres ability to deliver GQA qualifications and / or units of credit. Centres will be expected to meet the relevant regulatory authority criteria for delivery of qualifications prior to initial approval; continued compliance with the criteria will be monitored through regular EQA visits. It is recommended that centre reviews are conducted at minimum every six months by a GQA EQA.

New or multi-site centres may be required to undertake quarterly or more frequent EQA reviews to ensure that different locations can be seen to satisfy the national requirements.

GQA will ensure that unacceptable barriers relating to the assessment and internal verification of candidates in small glass companies do not deny recognition of competence to competent young workers. In such circumstances, GQA will demonstrate that its quality assurance procedures remain sufficient and rigorous to ensure that the competence outcomes have standing and credibility in the occupational area.

Enhanced quality procedures to ensure consistency of assessment and verification will be necessary and will include:

a high level of sampling of assessment decisions N.B. In some instances the EQA may visit each assessment location and qualification / unit of credit candidate (e.g. single candidates dispersed throughout different small companies on government funded programmes)

- an in-depth scrutiny of assessment plans, materials and records
- specific centre guidance aimed at the successful implementation of qualifications and / or units of credit in SMEs via approved centre partnerships. This can include guidance on the quantity and quality of valid, authentic, and transferable evidence expected to be attributed to individual candidates
- ensuring centres are following the requirements prescribed in any appropriate assessment strategies and applicable codes of practice
- the identification and publication of good practice in centres

3. Qualification / Unit of Credit Candidates

All candidates must register with a GQA recognised/approved centre. The centre must maintain appropriate candidate personal details for external audit purposes etc.

The centre will provide candidates with advice and guidance on how to prepare for assessment and allocate an Assessor who will assess candidate ability to meet the requirements of the relevant qualifications / unit of credit. It is the candidate's responsibility to demonstrate competence and to do this they must:

- prove they can consistently meet all the qualification and / or unit of credit criteria
- provide evidence from work, that they can perform competently in all the contexts specified in the qualification / unit of credit requirements
- prove that they have the knowledge and understanding required

It is therefore critical that quality evidence is provided in a format to allow the Assessor to make a decision and for the Internal Verifier to audit/verify his/her decision.

4. Evidence

A qualification and / or credit is awarded when a person has achieved the necessary outcomes of the qualification and / or unit of credit.

The specific combination of units necessary to achieve a qualification is detailed in the qualification structure. Certificates of Unit Credit can be awarded when candidates achieve any one, or more, units from the qualification.

The evidence the candidate brings forward is primarily evidence of what he/she knows. The assessment criteria / qualification requirements are described within the qualification and / or unit of credit itself and could incorporate practical skills in addition to primary evidence of knowledge.

The assessor's role is to judge each relevant item of evidence. Each must be judged against the qualification and / or unit of credit requirements. If items of evidence were collected for each of the criteria, the candidate may have to produce many items of evidence, well above the number actually required. GQA recommend holistic assessment.

When judging each item of evidence, the assessor is deciding whether the evidence:

- is authentic – i.e. actually produced by the candidate
- meets the criteria
- relates as appropriate to a context defined within the qualification and / or unit of credit
- confirms that the candidate has the required underpinning knowledge

When the assessor makes a decision about the candidate's competence, he or she examines all the evidence available to determine:

- if the evidence, as a whole, covers all the evidence of achievement
- whether the evidence indicates consistency in competent performance
- whether there is enough evidence on which to base an inference of competence

The answer can only be (one of):

- yes (the candidate has achieved)
- no (the candidate has not yet achieved)
- there is insufficient evidence to make a decision

Acceptable evidence

Knowledge evidence Being able to achieve a standard requires the ability to put knowledge to work. The qualification and / or unit of credit indicate the knowledge each person should use if they are to perform competently.

Oral or written assessments must clearly provide a suitable means of checking the breadth and depth of an individual's knowledge. Assessors will need to judge the best mix of knowledge evidence according to individual circumstances. Knowledge evidence is useful when deciding the quality of performance evidence, but must not be used in isolation to judge competence or as an alternative to performance evidence. Care must be taken that candidate evidence is auditable and verifiable.

It should not be necessary to test all of the candidate's knowledge separately. Performance evidence could show that the candidate knows what he or she is doing.

Performance evidence can be what the individual actually produces, or the way the individual achieves the standard. One is called product evidence and the other process evidence. Product evidence is tangible – you can look at it and feel it. Products can be inspected and the candidate can be asked questions about them.

Process evidence describes the way the candidate has achieved an outcome – how they went about it. This may be, for example, the way the quality of products is checked or the way customer complaints are handled. This usually means observing the candidate in action.

Performance evidence may be acceptable if the candidate is working in a glass or glass related environment

Simulation – from circumstances specially designed to enable the candidate's knowledge and / or performance to be assessed. It is not always possible or feasible to collect naturally occurring evidence. It is likely that some simulation may be needed, when it may take too long to wait for the evidence to arise e.g. it may be an aspect of performance which occurs infrequently. An example of this may be evidence of how to deal with emergencies.

The centre must obtain GQA EQA approval for the use of simulation.

Recommended Evidence

Personal Profile - A personal profile is helpful both to the qualification candidate and those involved in assessing and/or verifying competence and the use of such a document should be encouraged.

Candidates new to the sector and working primarily in an off-the-job learning environment will develop/compile a personal profile during the implementation of the Technical Certificate / Knowledge Qualification. Whilst it may not be immediately evident with the help of centre staff, the candidate may be able to identify some auditable prior skills and / or knowledge that may be transferable to the glass related occupational role.

Candidates already in employment in the sector will be able to provide a relevant personal profile and be able to demonstrate aspects of their skills/knowledge using real workplace experiences.

Evidence Guide/Brief - This section is intended to provide a guide for any training plans, reports or assignments produced to support the implementation of the Technical Certificate / Knowledge Qualification. Report / Assignment topics should reflect activities from the occupational area chosen and should be agreed by both candidate and assessor.

1. Introduction - Provide an explanation of the proposed assignment activity and its expected outcome.
2. Preparatory Work - This section should cover the actions and issues required prior to carrying out the main practical activity.
3. Practical Work - This will incorporate a step-by-step account of the practical activity incorporating appropriate quality procedures.
4. Quality Review - This will incorporate an account of the relevant quality checks in relation to the anticipated outcome e.g. in terms of product and/or customer expectations.

NB1: The above will take account of the prescribed format of the practical activities and underpinning knowledge requirements as described within the qualification booklet (standard and assessment guidance).

NB2 All of the above stages will incorporate individually as appropriate:

- Health and Safety regulations and requirements
- Products, materials and equipment
- Handling products and materials e.g. movement of and storage of, hazardous and non-hazardous materials
- Communications including working relationships, information systems, locating and recording
- Standard operating procedures
- Quality issues as appropriate e.g. systems and checks
- Problems, their repercussions and resolution

In terms of content, language and requirements, evidence within a Technical Certificate / Knowledge Qualification portfolio of evidence should satisfy terms such as explain, report, identify and investigate.

In order to make a fair and objective assessment, the assessor must be able to answer the question: Is there sufficient evidence that the candidate has the knowledge to meet the requirements of the qualification and / or unit of credit?

NB: Further guidance on acceptable evidence on each qualification can be found in the Introduction to the Qualification page of this candidate booklet.

Candidate Declaration

Candidate Name.....

Centre/Company Name.....

Assessor(s) Name(s).....

I acknowledge receipt of this copy of GQA qualification booklet. The unit structure provides information on which units must be achieved to be awarded the qualification. The individual units detail in the necessary requirements etc that I must achieve.

I understand that I will have an important role in preparing for and planning assessments and with guidance from the Assessor I will Collect and record relevant evidence.

I have been informed of the appeals system, should I want to appeal against any part of the assessment process.

I understand the assessments will be carried out with regard to the company's/centre's Equal Opportunities Policy.

Candidate signature.....

Date.....

Production/Process Activity Guideline

To aid new or established workers, a centre may wish to describe a normal production/process activity relevant to the achievement of the national vocational qualification and identify which units/elements it will contribute to, e.g. the act of preparation for work, implementation and completion will contribute to a number of units of competence.

Production/Process Activity Relevant to the Achievement of this Qualification	Contributory to: Units/Elements

J/618/5584	Competence and understanding in the Calibration of	Level 3	8 Credits
AD02	Advanced Driver Assistance Systems (ADAS)		

The aim of this unit is to ensure the candidate has the skills and knowledge required to work on and around ADAS. This includes an understanding of ADAS, including different types of systems, sensors, and functions. Candidates must also prove their understanding of the calibration techniques, equipment, and processes, including record keeping. Candidates will be required to show knowledge of some of the problems that can occur with ADAS.

Finally, as this is a competence-based unit, candidates must be assessed on their ability to carry out the calibration process

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.Ref.No		
1. Know the types of ADAS present in vehicles and how to deal with these	1.1 Give TWO examples of ADAS fitted to vehicles and how these can reduce accidents			
	1.2 Explain how to identify the presence of ADAS, to include: -visual checks -technology			
	1.3 List 3 different types of sensor used in ADAS and the features they support			
	1.4 Explain how to determine which ADAS functions require calibration			
	1.5 Explain where to find up-to-date accurate information on ADAS and calibration			
	1.6 Explain what information the customer must be made aware of prior to arranging the work			
2. Understand calibration	2.1 List TWO types of calibration			
	2.2 Explain the difference between these types			
	2.3 Summarise the equipment, identification process and conditions required to carry out each type of calibration.			
	2.4 Describe 3 problems that can affect calibration and suggest possible solutions			
	2.5 Explain why calibration is important and the possible implications if it is not fully and accurately completed. Include reference to the implications for the vehicle owner/driver and the repairer			
	2.6 Explain the proof of calibration provided to the customers and why this is important			
	2.7 Explain how the records of calibration are stored by the calibrating organisation			
3. Understand factors to consider when carrying out replacement work when ADAS is involved	3.1 Explain how to ensure that any parts fitted within the path of an ADAS sensor/signal are within manufacture specifications			
	3.2 Explain why components fitted in the path of an ADAS sensor/ signal should be within manufacture specifications			
4. Understand the problems that can occur	4.1 Explain the purpose of fault codes			
	4.2 Give an example of something that would create a fault code			
	4.3 Explain the implication in relation to ADAS after an adjustment has been made during a 4-wheel alignment			

Assessor comments

J/618/5584	Competence and understanding in the Calibration of	Level 3	8 Credits
AD02	Advanced Driver Assistance Systems (ADAS) (Continued)		

5. Be able to carry out calibration	5.1 Identify the vehicle, correct repair methods and equipment			
	5.2 Identify the type of calibration to be carried out for the vehicle being worked on.			
	5.3 Ensure vehicle protection kit is in place before commencing work and vehicle is in a suitable environment and condition			
	5.4 Locate vehicle OBD (on board diagnostics) port			
	5.5 Connect diagnostic equipment			
	5.6 Locate correct vehicle software			
	5.7 Navigate the diagnostic tool			
	5.8 Carry out a global check for fault codes			
	5.9 Complete the calibration process on a vehicle that has at least 2 operating systems			

Assessor comments

Notes

GQA, Unit 1, 12 O'Clock Court, Attercliffe Road, Sheffield, S4 7WW
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Email: info@gqaqualifications.com Website: www.gqaqualifications.com