

Guide to Control Plans





1.0	Introduction.....	2
2.0	Relationship to quality certification.....	2
3.0	When are control plans needed.....	3
4.0	What are control plans.....	3
5.0	Preparation of control plans.....	4
6.0	Related control systems.....	5
7.0	Acceptance.....	5
8.0	Monitoring activities	5
9.0	Transitional arrangements.....	6
	Appendix 1 General information.....	7
	Appendix 2 Control plan example (system and components).....	9
	Appendix 3 Control plan example (whole vehicle).....	10



VCA GUIDE TO CONTROL PLANS

INTRODUCTION

1.0 INTRODUCTION

Prior to issuing any Type Approval Certificate there is a need for Conformity of Production (COP) to be assessed. Conformity of Production is required to ensure that there are adequate arrangements in place to ensure that subsequent products continue to meet and conform to the approved type and to monitor that these arrangements continue to be effective during the life of the approval.

There are two main routes for demonstrating COP compliance. The first method is through a recognised quality management system such as the ISO 9001:2000 series or ISO/TS16949. In conjunction with a recognised quality system, specific control plans are also required. As the requirement for a recognised quality management system is not mandatory the second method for demonstrating CoP compliance is for manufacturer's who do not have a recognised quality system. In these cases a quality manual and detailed control plans are required. The quality manual and control plans should be detailed enough to ensure with a high degree of confidence that compliance with the relevant directive or regulations can be continually met. In conjunction with the quality manual and control plans a site visit may be required to ensure that the procedures supporting the application are in place and are sufficiently robust

2.0 RELATIONSHIP TO QUALITY CERTIFICATION

When considering the extent of the initial assessment to be carried out, the EC type-approval authority *may* take account of available information relating to quality systems not accredited (non UKAS - United Kingdom Accreditation Service / EAC - European Accreditation Council / IAF - International Accreditation Forum) in conjunction with detailed relevant control plans, however the type authority *must* take account of a suitably accredited quality management system in assessing the CoP requirements.

The suitability of quality system certifications depends mainly upon the scope covering the respective manufacturing operations and locations and also upon the recognition of the accredited registration arrangements for the certification body. VCA currently accepts all certification bodies accredited by UKAS - as a member of the European Accreditation Council (EAC) and the International Accreditation Forum (IAF). Similarly those notified to VCA by other approval authorities as being acceptable in their respective territory.

For certain quality systems, usually those having certification to ISO9001/TS16949, manufacturers *may* be able to demonstrate that their arrangement for control plans is effectively satisfied as an integral part of the quality system.



3.0 WHEN ARE CONTROL PLANS REQUIRED?

specific control plan information is required in the following circumstances:

- a. clients applying for approval to VCA for the first time;
- b. existing clients applying for approval in a new subject grouping e.g. body structure where previously only engine related subjects were covered;
- c. applications for European Whole Vehicle Type Approval;
- d. approval holders not visited by VCA who requested that VCA accept suitable ISO9001 certification for National Whole Vehicle Type Approval (Car or Goods) and/or international systems approvals;
- e. components approvals having specific COP requirements e.g. seat belts & glass

4.0 WHAT ARE CONTROL PLANS?

A control plan is the documented description of those procedures, checks or assigned activities necessary to verify that production units continue to conform to the type approval requirements with regard to specification, marking and performance. (Annex X paragraph 2.2 – 70/156EEC).

The aim of the control plan information is to show that the appropriate level of control exists in relation to those aspects of the product, which are critical to its continued type approval, it should also provide a means of monitoring compliance. It may be that between models, the needs are broadly similar for a particular subject however consideration needs to be given as to whether or not the conditions should be different for specific models. This may be for example where initial results are close to the limit or special specifications or processes were introduced in order to achieve compliance.

The documented description normally addresses the elements outlined below in a separate document (for example a Quality Plan) but control criteria may be clearly referenced in accessible sections of specific quality documentation.

For the arrangements to be effective and capable of demonstrating conformity, the control plan information needs to take account of requirements for particular types or models and individual subjects applicable to those types. It will not be acceptable for example to give only general statements such as “controls ensure that all legislative requirements are met”, VCA believe that the following may need to be addressed in order to establish adequate understanding for specific systems and components:

Control Description	describing what is being checked for
Test Method	is it a visual check, electrical, mechanical? A visual check may be made against a master. Dimensions may be checked in a rig, a voltmeter may be needed for electrical tests etc
Pass/Fail	what are the criteria against which a sample is deemed to have passed or failed?
Frequency	is every product tested or 1 in 500, for example



Department	those responsible for the check or test
Report	method of recording results
Follow up	Responsibility for follow up action

For whole vehicle approval, the control plan arrangements may be limited to verifying the correct build specification in relation to the system and component approvals.

5.0 PREPARATION OF PLANS

Preparation of plans, the structure and amount of detail included within the above framework, rests entirely with the manufacturers in relation to their own particular circumstances. For example:

- a. the format of the Control Plan is not defined and may be as the manufacturer chooses to present it.
- b. the content of the Control Plan is not defined except for directive specific clauses.
- c. the checks or test *may* be carried out by or on behalf of the manufacturers and may include evidence of supplier's controls. Some specific regulation may require that the manufacturer has immediate access to suitable test equipment.
- d. a common control systems used across a range of similar products, sites or subjects (e.g. body, drive train, etc.) will be acceptable on a suitable referenced single plan.

Vehicle manufacturers having quality system certification such as ISO9001/TS16949 and/or a quality management approach which embraces the requirements above (e.g. in the form of integrated production and modification release procedures) can discuss with VCA how the plan could consist of an appropriate summary of the control route or loop and specific references to those procedures.

By way of illustration, appendices 1, 2 & 3 show one format for a separate control plan with useful front sheet information and outlines of an arrangement to cover a system approval for various subjects (appendix 2) and a whole vehicle approval (appendix 3).

It is particularly stressed that these are only outline examples, provided to help with understanding. Other formats or content may be appropriate. Any values shown do not represent acceptance levels or target requirements.

6.0 RELATED CONTROL SYSTEMS

Certain elements, critical to COP in the type approval context, are not necessarily covered by the control plan as defined above. Where VCA is not directly involved with the quality management system, they will need to establish how the manufacturer's control procedures are applied to ensure the following:

- a. control of change, so that for example, alternative suppliers or revised specifications are not introduced before the type approval of the change has been authorised.
- b. control of the accuracy issue of Certificates of Conformity, so that details are pertinent accurate for the vehicle variant produced and the certification issued.

7.0 ACCEPTANCE

The arrangements outlined above both satisfy the respective legislative responsibilities and enable VCA to build confidence in the overall control of the type approved product to be issued with an approval certificate. Manufacturers will be requested to propose their own control plan arrangements for VCA to discuss with them on an individual basis. Where revision of any aspect is considered necessary to adequately fulfil the initial requirements, this will be mutually agreed with the manufacturer and an amended control plan established.

8.0 MONITORING ACTIVITIES

EC Directive 70/156/EEC Annex X paragraph 2.4 requires the authority issuing an approval to monitor the manufacturer's conformity controls. That section, and the clauses in some of the individual directives also require the authority - when not satisfied with the manufacturer's assurance of conformity - to select samples and subject them to type approval tests. A good understanding between the manufacturer and VCA will establish arrangements where such special action is the exception.

VCA has a responsibility to periodically monitor the implementation of the control plan arrangements. This will normally be by visiting the sites where the actions are carried out (as certain directives require - though other arrangements may be agreed). Records of decisions, actions or results should be retained for a realistic period (which can be agreed with VCA). Several aspects will be relevant to the monitoring activity, for example:

- a. monitoring arrangements will review any changes which the manufacturer has made to the initial control plan with particular reference to aspects discussed above;
- b. the frequency of monitoring will be kept to a minimum and will be discussed according to the plan content, any specific directive requirement and previous review findings;
- c. where some of the controls outlined are to be carried out by a supplier VCA may wish to verify that the supplier and the products or services concerned are acceptable to the manufacturer as defined within the quality system (e.g., is on an approved suppliers list with an appropriate rating);

Where VCA continues to monitor the quality management systems, (e.g. as part of COP assessment of ISO9001/TS16949 certification) the above review of control plans will wherever practicable be timed to coincide with that activity.

Where ISO9001/TS16949 surveillance is carried out by another certification body or the quality system monitoring is done by visits from another authority the review will focus only on control plan arrangements. Any visits will of course be much shorter in duration and in



suitable circumstances, these may be combined with other visits to the company by VCA testing or inspection staff. Alternatively, some appropriate aspects may be dealt with by correspondence.

9.0 TRANSITIONAL ARRANGEMENTS

Provisional conformity clearance *may* be granted to manufacturers who can demonstrate suitable controls during an initial audit but whose processes and controls are not fully documented. This provisional clearance will be granted for a specific period agreed with the manufacturer at the end of the agreed period the manufacturer should be able to supply the correct documentation.



APPENDIX 1

SOME HELPFUL HEADINGS FOR GENERAL INFORMATION

COMPANY: XYZ Company Ltd

PRODUCT DESCRIPTION: Passenger Car

TYPE APPROVAL SUBJECT: All system directives and EC Whole Vehicle approval issued by VCA

SPECIFIC (DIR/REF) COP TEST REQUIREMENTS:

Applicable requirements indicated on subject plans or addressed by XYZ company procedure PC-123

SITE OF MANUFACTURE:

Operations related to the above are carried out at the following sites:

- Engine Manufacture:
- Body Pressing and Body Assembly:
- Vehicle Assembly:

APPROX. PROD. VOLUMES:

Continuous production for most vehicle types - approx (x) per year

GENERAL OUTLINE OF CONTROL PLAN RELATED INFORMATION:

XYZ company holds a quality system certification to ISO9002

Information addressing engine, body and vehicle assembly controls related to approvals is provided, using the attached model control plan applied in accordance with WI-123.

Company procedure(s) (PB0123) require the Homologation Department to authorise both initial build schedules and subsequent changes before release for production.

Details to be entered on Certificates of Conformity are authorised by the Homologation Department and controlled in production by reference to Variant/Version, build code and VIN.

EC WV C.O.Cs are generated at national distributors by data link. Input is controlled by the Homologation Department.

COMPANY: I C Kleeerly Ltd

PRODUCT DESCRIPTION: Mirror

TYPE APPROVAL SUBJECT: EC Directive 70/127/EEC

SPECIFIC (DIR/REG) COP TEST REQUIREMENTS:

Impact Test:
(X)/Year at contracted laboratory
Assembly Specification:
(X)/batch, include. edge rad and marking
Reflectivity:
by Glass supplier with COC

SITE OF MANUFACTURE: XYZ Industrial Estate

APPROX. PROD. VOLUMES:
Batch of 100/Day

GENERAL OUTLINE OF CONTROL PLAN RELATED INFORMATION

I C Kleeerly Ltd has a documented control system dedicated to the production of after - market mirrors.

Changes to the product are verified against type approval requirements and authorised for production on form 1234 following any necessary homologation action.

Appendix 2. Example of a Control Plan

Subject	Legislation		CoP Requirements		
	Directive	Regulation	Inspection Type	Frequency	Control
Noise	70/157	51	1	1 per year	IVXX1
			2	1 per month	
Emissions	70/220	83	1	1 per month	IVXX2
			2	1 per month	
			4	100%	
Audible Warning	70/388	28	1	1 per Year	IVXX3
			2	1 per month	
			4	100%	
Seat Strength	74/408	17	2	1 per month	IVXX4
			3	100%	
			4	100%	
			5	100%	
Speedometer	75/443	39	1	1 per year	IVXX5
			2	1 per month	
			4	100%	

Key	
1	Vehicle Test
2	Visual Inspection
3	Record on build log
4	Function check
5	Supplier CoP

Control Description Sheet – IVXX1 Noise

Type of Inspection	Description	Procedure	Responsibility	Record
1	Drive by noise	IV-1.2.3	Quality	Test Report
2	Exhaust/Air cleaner/ECU ID	IV-1.2.3	Quality	Monthly CoP audit sheet

Control Description Sheet – IVXX4 Seat Strength

Type of Inspection	Description	Procedure	Responsibility	Record
2	ID/Installation	IV-2.3.4	Quality	Monthly CoP audit sheet
3	Seat Function	IV-2.3.5	Production	Build log
3	Seat Anchorage	IV-2.3.5	Production	Build log
5	Seat Test	IV-3.4.5	Supplier	Test Report



APPENDIX 3

ONE EXAMPLE OF A SPECIFIC CONTROL PLAN FOR WHOLE VEHICLE

CONTROL DESCRIPTION	AREA RESPONSIBLE	FREQUENCY	ACCEPTANCE STANDARDS	FORM OF RECORD	RESPONSIBILITY FOR FOLLOW-UP ACTION
Comparison of initial order, engineering spec, build spec, bill of materials, with type approval cert & C.O.C.	Quality Audit	Twice per year	No deviation from matrix or from C.O.C. data	Report	QA Manager
Specific TA Components sign-off during assembly	Assembly	100% of production	No deviation from build card	Build Card	Team Leader
Type approval audit on finished vehicles	Quality Audit/Homologation	x sample of production	No deviation from information document variant matrix	Report	QA Manager