Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 08 15	1	1	QMH:1
Section	Produced	Audited	Approved	
QUALITY MANUAL	A. Wilinger		C.Palm	

QUALITY MANUAL

This quality manual describes the quality system and the methods used in quality performance at Gränges Autoplastics AB (GA).

The manual has been prepared in order to, together with other manuals (see QM 3), fulfil the requirements according to the standard ISO 9001/QS 9000 (not applicable for installation and service).
Besides other routines that have been developed by experience in order to have the quality system function effectively so the demands and expectations of the customers will be fulfilled are included in the quality manual.

AIM

The manual has two purposes.
It serves both as an instruction for the internal quality work and also as an information to customers and external contacts about the quality system of the company.

AUDIT

When discrepancies in the quality systems are discovered the system shall be audited. This means an investigation if the discrepancy depends on lacks in the quality system, which in this case must be corrected.

All changes are entered in the manuals and distributed according to valid plan (see QMH 5 Distribution). The quality director has the authority to change in the quality manual. Concerned divisions take part in the design.

The quality system is according to plan audited once a year. The audit is performed by the management through the undersigned.

Kungälv, 1999 08 15
Approved

Christer Palm
President

Anders Wilinger
Quality director

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:2
Section TABLE OF CONTENTS	Produced A. Wilinger	Audited	Approved A. Wilinger	

TABLE OF CONTENTS

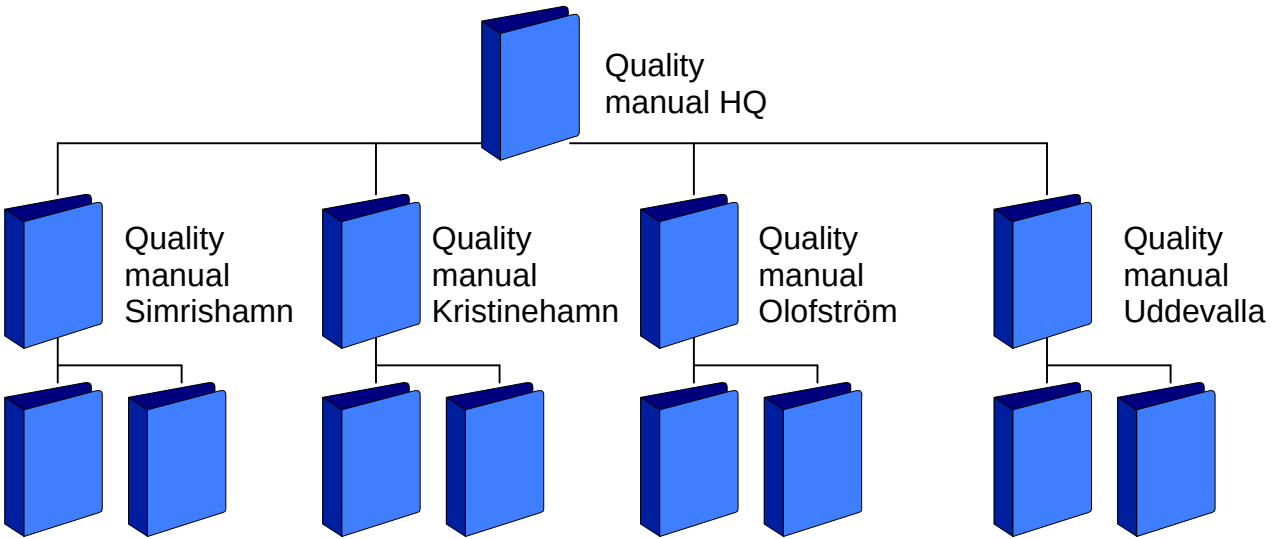
Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:3
Section QUALITY SYSTEM STRUCTURE	Produced A. Wilinger	Audited	Approved A. Wilinger	

QUALITY SYSTEM STRUCTURE

The quality manual at the head quarter in Kungälv (HQ) serves as the comprehensive document concerning the quality work within GA.

The manual describes the quality system on management level and refers in other respects to local quality manuals at respective production units.

The local quality manuals refer in their turn to other manuals within respective unit:



Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:3:2
Section QUALITY SYSTEM STRUCTURE	Produced A. Wilinger	Audited	Approved A. Wilinger	

DOCUMENT STRUCTURE

The documents in the quality manuals will have the following notation:

Quality manual HQ	QMH
Quality manual Simrishamn	QMS
Quality manual Kristinehamn	QMK
Quality manual Olofström	QMO
Quality manual Uddevalla	QMU

Other manuals will follow the same pattern. Process manual formsprut in Simrishamn will have the notation PMFS and the logistic manual in Kristinehamn will have the notation LMK etc.

TEXT STRUCTURE

Documents in the quality system will have following type: Arial

Fonts will be as follows:

MAIN HEADLINE	(Capitals, bold, 16, Headline for chapter)
SUBHEADING 1	(Capitals, bold, 14)
Subheading 2	(Lower-case, bold, 12)
<u>Subheading 3</u>	(Lower-case , Underlined, 12)
Text	(12)

Pages with drawings and columns are allowed to diverge from above mentioned.

Other deviations are allowed if justified, for example quality policy QMH 8:8 owing to distance readability.

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:3:3
Section	Produced	Audited	Approved	
QUALITY SYSTEM STRUCTURE	A. Wilinger		A. Wilinger	

QUALITY SYSTEM REFERENCES

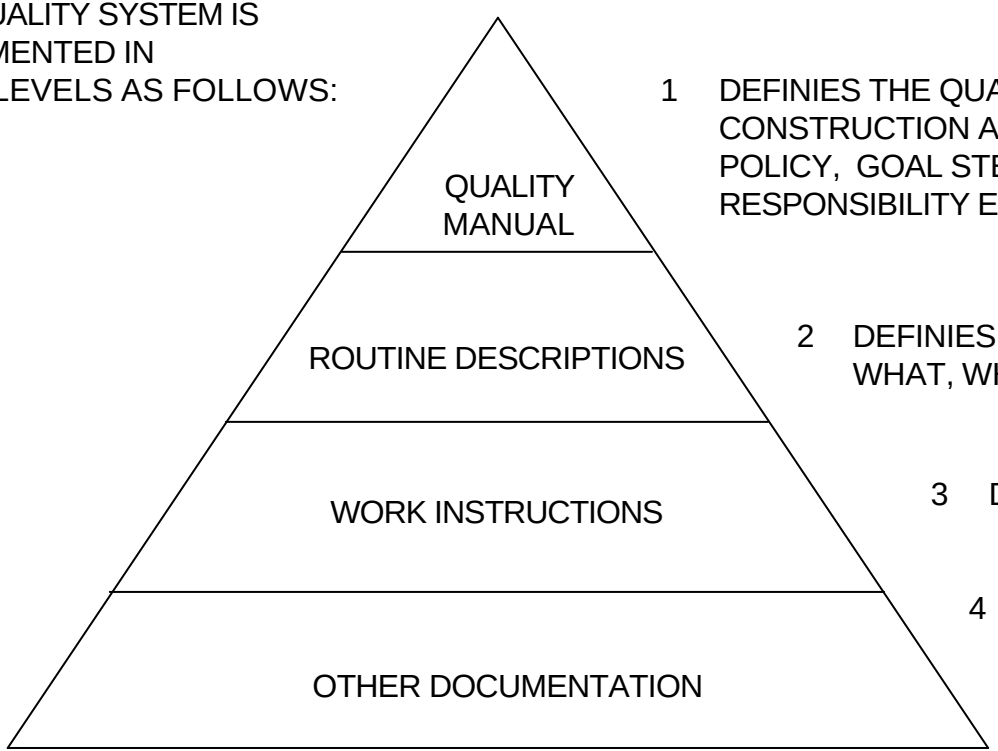
The quality system at GA refers to documents as follows:

ISO 9000	Internationell demands
CUSTOMER DEMANDS QS 9000 PPAP	Customer demands
GA-SPECIFIC DEMANDS	Company's internal demands
CUSTOMER REFERENCE MANUALS	

GA's quality system is produced according to above standards and demand specifications.

QUALITY SYSTEM LEVELS

THE QUALITY SYSTEM IS DOCUMENTED IN FOUR LEVELS AS FOLLOWS:



1 DEFINIES THE QUALITY SYSTEM CONSTRUCTION AND STRUCTURE, POLICY, GOAL STEERING, RESPONSIBILITY ETC

2 DEFINIES WHO, WHAT, WHEN

3 DEFINIES HOW

4 REGISTRATION OF INFORMATION, INSPECTION RESULTS ETC

Document QUALITY MANUAL HQ	Date 99 10 14	Edition 1	Page 1	Reg. No. QMH:5
Section DISTRIBUTION	Produced A. Wilinger	Audited	Approved A. Wilinger	

DISTRIBUTION

This quality manual is not distributed in a traditional way (on paper). The manual is available for everybody connected to GA's network. To secure information about updates, these are "distributed" by a message via Lotus Notes to all e-mail users in the factories concerned. The message is announced as subject "Quality Manual". The message informs about which chapters resp up-date is referred to. It is thereafter everybody's responsibility to take notice of the updates. In the document the changes are marked in *italics* for a time of 14 days.

Manuals in files
For customers and other visitors traditional manuals (paper in file) are available in all factories. Respective quality manager keeps and maintains the files.

The document QMH 5:3 is filed in the beginning of the manual.

The person in charge of the manuals secures that they correspond to the original by signing this in the document indicating the latest revision date. See QMH 5:3.

To print out a paper copy of the manual or parts of it is allowed for all e-mail users on the condition that the update is secured according to the above.

Individual papers
On occasional printing of individual pages, these have a validity of 24 hours. This will be indicated in a text which is automatically written on all paper prints. However, this is not valid for accounting documents (minutes or similar documents, in which measuring- and test results are written).

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 10 14	1	1	QMH:5:2
Section	Produced	Audited	Approved	
DISTRIBUTION	A. Wilinger		A. Wilinger	

Everyone who prints out pages from the Manual is responsible for its validity. Paper copies can be used after the printed time of validity on the condition that its validity is secured by checking the respective e-mailbox. The automatically printed time of validity is then striked out and replaced with the text: "Validity secured by" ….. signature + clarification of signature.

When updating accounting documents a special message is to be sent out to all users, securing that the document is replaced at all work places, where it is used.

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 10 14	1	1	QMH:5:3
Section	Produced	Audited	Approved	
DISTRIBUTION	A. Wilinger		A. Wilinger	

DISTRIBUTION

The Quality Manual of Gränges Autoplastics is executed on electronical media and is available to all employees within the company via the internal network under the address "Quality System". The document monitoring is thus secured by mutual use of the same original. This quality manual is a printout of the original and its update and correspondence to the original is secured by the undersigned.

Name ……

Latest update ……

Document QUALITY MANUAL HQ	Date 99 09 06	Edition 3	Page 1	Reg. No. QMH:6
Section POSSESSORS OF QS 9000 MANUALS	Produced A. Wilinger	Audited	Approved A. Wilinger	

POSSESSORS OF QS-9000 MANUALS

Manual:	Edition	Possessor:	Plac.
QS 9000	Ed. March 98 (Third edition)	A Wilinger	HQ
		P Öhman	HQ
		H Scharin	HQ
		U Larewall	HQ
		J Bodin	HQ
		J Svedman	HQ
		P Eriksson	SH
		M Olsson	SH
		LC Maguire	SH
		N-I Andersson	SH
		L Kindesjö	SH
		B Schill	SH
		A Persson	SH
		S Gardiner	SH
		R Strandh	SH
		K-G Nilsson	SH
		L Åkesson	SH
		P Thulin	OM

Manual:	Edition	Possessor:	Plac.
QS 9000	Ed. March 98 (Third edition)	K-J Karlsson	OM
		B Asplund	KH
		S Hagman	KH
		H Starkman	UA
PPAP	Ed. Feb 95 (Second edition)	A Wilinger	HQ
		U Larewall	HQ
		LC Maguire	SH
		A Persson	SH
		S Gardiner	SH
		K-G Nilsson	SH
		P Eriksson	SH
		B Asplund	KH
		S Hagman	KH
		P Thulin	OM
		K-J Karlsson	OM
		H Starkman	UA

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 02 24	2	1	QMH:6:2
Section	Produced	Audited	Approved	
POSSESSORS OF QS 9000 MANUALS	A. Wilinger		A. Wilinger	

POSSESSORS OF QS-9000 MANUALS

Manual:	Edition	Possessor:	Loc.
QSA	Ed. March 98 (Second edition)	A Wilinger	HQ
		P Öhman	HQ
		H Scharin	HQ
		J Bodin	HQ
		U Larewall	HQ
		N-I Andersson	SH
		O Jarltoft	SH
		K-G Nilsson	SH
		P Eriksson	SH
		A Persson	SH
		P Thulin	OM
		K-J Karlsson	OM
		B Asplund	KH
		E Burger	KH
		H Starkman	UA

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 09 06	2	1	QMH:6:3
Section	Produced	Audited	Approved	
POSSESSORS OF QS 9000 MANUALS	A. Wilinger		A. Wilinger	

POSSESSORS OF QS 9000 - MANUALS

Manual	Edition	Possessor	Loc.
APQP	Ed. Feb 95 (First edition)	A Wilinger	HQ
		U Larewall	HQ
		M Olsson	SH
		A Persson	SH
		S Gardiner	SH
		K-G Nilsson	SH
		P Eriksson	SH
		B Asplund	KH
		S Hagman	KH
		P Thulin	OM
		K-J Karlsson	OM
		H Starkman	UA
FMEA	Ed. Feb 95	A Wilinger	HQ
		M Olsson	SH
		P Thulin	OM
		B Asplund	KH
		H Starkman	UA
SPC	Ed. March 95	A Wilinger	HQ
		LC Maguire	SH
		P Eriksson	SH
		P Thulin	OM
		B Asplund	KH
		H Starkman	UA
MSA	Ed. Feb 95	A Wilinger	HQ
		LC Maguire	SH
		P Thulin	OM
		B Asplund	KH
		H Starkman	UA

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:7
Section	Produced	Audited	Approved	
ORGANIZATION	A. Wilinger		A. Wilinger	

ORGANIZATION

GA's organization is shown in "Organization chart GA AB" which can be found at Personnel administration in Simrishamn. The chart shows the organization on management level and at the factory in Simrishamn. Otherwise local charts describing the organization are available at each location. This is shown in resp. local quality manual.

The organization chart is updated continuously and distributed according to plan.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:8
Section MANAGEMENT RESPONSIBILITY	Produced A. Wilinger	Audited	Approved A. Wilinger	

MANAGEMENT RESPONSIBILITY

At GA the management has defined and documented the company's policy, goal and other commitments concerning quality. All local managers and managers of functions and departments are responsible that everybody is aware of the quality policy and that it is practised and maintained within respective field of responsibility.

MANAGEMENT REPRESENTATIVE

The management at GA has among themselves elected representatives (quality director/quality managers) who maintain the quality system and guarantee it's force and effectiveness.

Quality director/quality managers report to the management resp local management about how the quality system works, existing quality lacks and results from internal quality audits.

MANAGEMENT REVIEW

The management at GA audits twice a year the quality system's ongoing suitability and efficiency to meet the demands for quality standard ISO 9001/QS 9000, the demands from the customers and GA's established policy and quality goals.

The review takes place on management level as well as on local level.

Identification and adding of necessary resources is a part in the audit.

Documentation over the audits is preserved. The documentation will show that all elements (down to 4-figured items e. g. 4.10.4.2) in the QS-standard have been dealt with at the audit. The documentation will also reflect the reactions, attitudes and measures of the management.

A group with cross-functional character shall carry out the reviews.

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 03 08	2	1	QMH:8:2
Section	Produced	Audited	Approved	
MANAGEMENT RESPONSIBILITY	A. Wilinger		A. Wilinger	

BUSINESS PLAN

In order to improve the strategic development of GA as the leading supplier to the vehicle industry, the management uses a business plan, which is audited at least twice a year. The business plan consists of plans and goals on both short-term base (1-2 years) and long-term base (3-5 years).

The plan named ”Business Plan Autoplastics” is kept at the management at the headquarter in Kungälv and at MD in Oderzo. The plan is presented and discussed with personal within the headquarter management and with local plant managers and local management’s and also representatives from the union at GA factories when having Local Board – meetings.

ANALYSIS AND USE OF DATA

GA analyses and documents trends with reference to quality, productivity, efficiency and profitability and also current quality levels for products and services.

The data are compared with competitors and/or suitable standards.

Comparison also takes place against the comprehensive business goals.

The above is translated into information for decision-making and long-term policy planning.

Responsibility

Responsibility for above mentioned is allocated as follows:

Field:	Responsible:
Quality	Qual directors, qual mgrs
Productivity and Efficiency	Local managers and productivity managers
Profitability	Executive board, local mgrs

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:8:3
Section	Produced	Audited	Approved	
MANAGEMENT RESPONSIBILITY	A. Wilinger		A. Wilinger	

BENCHMARKING

Aim

Benchmarking is an activity that aims gaining advantage from other people's knowledge and experiences within different areas. The implementation of benchmarking is usually arranged and agreement is made with someone to perform a benchmarking within a certain (limited) area. Levels are thereafter compared how good business is in the special areas that were chosen to be studied. It is important that both sides benefit from the result and therefore both parties must show the present situation or level. The one that gained the most in one area has the most to teach and a well carried out benchmarking results in that both sides have learnt equally from each other. Sometimes one doesn't know ahead that one of the parties is better in one area and in such case setting-off against something else in another area is possible. Benchmarking is divided in three different categories.

Internal benchmarking

Internal benchmarking means that a benchmarking is performed with another department or factory within the same company or business-/ organization. One advantage with internal benchmarking is that there is no competitive hindrance that prevents communication and sharing experiences.

Benchmarking in own branch

Benchmarking in one's own branch may be that a supplier to the vehicle industry performs a benchmarking with another supplier to the vehicle industry or that a bank does it with another bank. The advantage is that one can concentrate on special branch areas that can be difficult to find in another branch. The greatest disadvantage is that the competing situation may obstruct the possibility to perform the benchmarking. While benchmarking in one's own branch it is important that both parties are aware that they help each other so that both will be better compared to other actors (competitors).

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:8:4
Section	Produced	Audited	Approved	
MANAGEMENT RESPONSIBILITY	A. Wilinger		A. Wilinger	

Benchmarking in another branch

Benchmarking in another branch has as greatest advantage as there is no competitive situation that could obstruct the realization. Another advantage is that one may discover questions that are more or less unknown in one's own branch. Often most valuable experiences are made in other branches.

Benchmarking can also be a project where two or more suppliers work together and the customer may take part.

Benchmarking at GA

At GA benchmarking is performed as a continuously on-going activity. The planning of benchmarking takes part both on management level and on factory- and department level.

Responsibility

The responsibility for planning and carrying out stays with the management, factory managers, department managers and other responsible in different areas.

Documentation

All benchmarking that will be performed must be documented as follows:

1 An agenda is made together with the intended participant. The agenda must describe the areas to be covered.

2 Minutes should be taken describing the obtained results.

3 A plan should be established describing the activities that are planned regarding the results. Above is to be filed for three years.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:8:5
Section MANAGEMENT RESPONSIBILITY	Produced. A. Wilinger	Audited	Approved A. Wilinger	

CONTINUOUS IMPROVEMENTS

”One who stops being better stops being good”

According to our quality policy (QMH 8:8) we will always strive after continuous improvement and development of our processes, methods, routines and equipment to secure our on-going ability to compete in the surrounding world that is always changing and where the demands constantly increase.

Improvement does not mean proceedings taken in order to maintain and re-establish various items to the level agreed with the customer (corrected steps). It means improvements besides the agreed demands.

Each department within GA will analyse and evaluate various improvement possibilities to be able to prove on-going and performed improvement projects. The projects shall be taken to the minutes together with a plan describing the realization, the people in charge, timetable and the result.

The improvement work must not necessarily be performed in project form. It can be carried out continuously in respective department. The demand of minutes is still valid and therefore suitable areas/sections must be clearly defined.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:8:6
Section MANAGEMENT RESPONSIBILITY	Produced A. Wilinger	Audited	Approved A. Wilinger	

CUSTOMER SATISFACTION

Once a year GA measures the level of customer satisfaction. The measurement concerns the satisfaction with GA's products and services. Some key functions, shown in QM 8:7 ”Questionnaire”, are used when measuring. The measurements must be performed once a year.

Documentation
The results from the measurements must be documented and shown clearly. Factors with low customer satisfaction should be shown in a special way.

The documentation shall be accounted so the results can be shown per customer and factory. For instance show how the quality level from the factory in Olofström to Saab in Trollhättan is or how the delivery precision from the factory in Simrishamn to Volvo in Gent is. Trends shall be shown in the accounts. Trends shall be compared with competitors.

Actions
An action program shall be produced for the factors with the worse results.

Distribution
The result from customer analysis shall be informed to the management and factory managers.

Responsibility
Respective business area responsible/KAM takes responsibility that the measurements are performed and documented. The factory managers take the responsibility regarding information within their own area of responsibility regarding results from measurements and production of proceeding plans. The factory managers are also responsible that names on correct contact persons (regarding the own unit) are compiled for the measurements.

The management has the overall responsibility that an effective business is carried out within GA when it comes to customer satisfaction. The management brings the issue forward for discussion at management meetings and during the management review.

QUESTIONNAIRE

PLASTAL

Issued by
Ragnar Strandh

	Very Poor			Inter-mediate	Very Good
1. How fast do we respond to an enquiry	•	•	•	•	•
2. How do you experience our technical competence	•	•	•	•	•
3. How do we accomplish a development assignment	•	•	•	•	•
4. How do we introduce a change which has been agreed upon	•	•	•	•	•
5. How do you experience our documentation	•	•	•	•	•
6. How do you experience our product quality	•	•	•	•	•
7. How do we react short term to corrective actions	•	•	•	•	•
8. How do we react to long term corrective actions	•	•	•	•	•
9. How is our delivery precision	•	•	•	•	•
10. How is our delivery information perceived	•	•	•	•	•
11. How are you treated by the switchboard	•	•	•	•	•
12. How successful are we finding whom you are aiming for	•	•	•	•	•
13. How fast do you generally reach the person you are contacting	•	•	•	•	•
14. How is Gränges Autoplastics as a company presented to yourself	•	•	•	•	•
15. What is your general impression of Gränges Autoplastics	•	•	•	•	•

Remarks: .....

Name: .....

Company: .....

Department: .....

Function (Please underline): Management, Purchasing, Design/Dev., Quality, Logistics, Sourcing, Marketing, Sales, Engineering, Other: .....

Please return the form to: Gränges Autoplastics, Box 163, S-272 24 SIMRISHAMN; Sweden Fax +46-414 28 600

THANK YOU FOR YOUR CO-OPERATION

QMH 8:8 Sign.
Dat. 990706 Utg 9

QUALITY POLICY

Gränges Autoplastics AB shall act as a **leading supplier** regarding quality and meet the high quality demands the automotive industry requires. Demands for zero defects will be reached through skilled, responsible and **engaged personnel** together with correct carried out preparation of production and **suitable production equipment. Total Quality Management (TQM)** together with **continuous innovation** shall characterise the overall operation. **Suppliers shall be involved** in order to receive maximum **value for the customer** .

The quality system will be developed so the quality ability of the company **is improved continuously** according the strategy.....

Get A4 format

" One who stops being better stops being good "

The quality will be **measured against targets.**

Satisfied customers are the best guarantee for continuous development and profitability.

Kungälv 1999-07-06

Christer Palm
President

Roland Augustsson
Production

Eddie Westergren
Heavy vehicles

Hans Scharin
Administration

Paul Öhman
Project, processing development and purchase

Danilo Fattor
Italy

Anders Wilinger
Quality

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:8:9
Section	Produced	Audited	Approved	
MANAGEMENT RESPONSIBILITY	A. Wilinger		A. Wilinger	

QUALITY TARGET

The management stipulates, together with the personnel, targets within all areas where measurable targets can be defined. Regarding quality the targets concern among other PPM regarding deliveries to customer, internal cassation and delivery precision.

The targets are compiled once a year in a ”target file”. The file is available at the management, the factory managers and department managers.

The follow up of the target fulfilment takes place twice a year.

The department managers are responsible that suitable measurements are taken when set up targets not are reached. The measurements must be documented.

If targets are exceeded or reached earlier than planned the objective must be audited.

Document QUALITY MANUAL HQ	Date 99 08 15	Edition 1	Page 1	Reg. No. QMH:8:10
Section MANAGEMENT RESPONSIBILITY	Produced A. Wilinger	Audited	Approved C. Palm	

QUALITY RESPONSIBILITY

The comprehensive quality responsibility rests with the president of the company.

Below the president the managers in the organization are responsible that the quality work within each area is pursued according to the company's quality policy and quality system and that the quality demands are fulfilled.

The business area managers are responsible for the quality assurance progress during development of new products.

The production director/production managers are responsible that correct quality is obtained in all faces in the production and that all material is packed and marked correctly.

The purchasing manager is responsible that material according to specification is obtained in time.
The quality director/quality managers are responsible for the quality system and its development together with coordination of the company's total quality activity.

In other respects see definition of responsibility and rights at resp. department.

The managers delegate in different ways and in various extents the quality responsibility to their colleagues. The responsibility for the quality rests always on the individual in her daily work.

Kungälv 990815

Christer Palm
President

Paul Öhman
Project, processing development and purchase

Roland Augustsson
Production

Hans Scharin
Administration

Eddie Westergren
Heavy vehicles

Anders Wilinger
Quality

Danilo Fattor
Italy

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:12
Section QUALITY AUDIT	Produced A. Wilinger	Audited	Approved A. Wilinger	

QUALITY AUDIT

AIM

The aim with the audit activity is to continuously develop and improve the quality system as well as control the observance. GA's customers demand that we within GA are able to present evidence that we have the ability to fulfil their demands on quality, efficiency and delivery precision. The aim with the audit activity is also to always be able to prove the existence of a working quality system.

The quality audit at GA consists of three main parts, i e system audit, process audit and product audit.

SYSTEM AUDIT

Once a year audit plans are established. Those are established on both factory and management level.

The audits are carried out by GA's trained internal auditors. See QMH 12:9. Two auditors should normally perform an audit. One of them is appointed lead assessor. In some cases it is appropriate to include an especially skilled person with special competence within the process to be audited. This person may replace the assisting auditor. The responsible auditor has the authority to make this decision.

The auditors will to a suitable extent perform audits in other GA factories than the one they are organizationally placed in. The reason is to gain a broader knowledge basis and greater exchange of experience. Assisting auditors are preferably chosen at the own factory in order to save travel expenses. Auditors performing audit, working in other factories, will as far as possible co-ordinate this work with other issues which involves visit to this factory.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:12:2
Section QUALITY AUDIT	Produced A. Wilinger	Audited	Approved A. Wilinger	

Frequency
Generally all departments shall be audited once a year. The audit is normally planned to take place during the first part of the year. Measurement and follow up-audits are performed during the second part of the year.

Basis
The basis for internal audits is QS 9000,QSA and GA's quality manuals.

Performance
The performance of system audit occurs in following steps:

1. Audit plan (QMH 12:4) is established and communicated to the departments to be audited.
2. More precise time and other conditions concerning each audit are established together with the department to be audited.
3. The audit is planned. Areas to be audited are chosen. Checklist (QMH 12:5) is to be established. NB! If shiftwork exists the audit must comprise all shifts.
4. The audit is carried out. Discrepancies are noted in "discrepance report quality audit" (QMH 12:7).
   Discovered discrepancies are to be reviewed together with responsible at site so no mistakes will appear afterwards. In this review it is important to be **very precise** so there is no doubt if there are discrepancies and what this involves.
5. A report is to be drawn up (QMH12:6). The report together with discrepance report shall be communicated with the responsible at the audited department. All discrepancies must be discussed thoroughly so they are obvious for everybody concerned.
6. Measurement plan is performed and communicated to the auditor. If no limit exists this must take place within three weeks.
7. The measurements are followed up in a follow up audit. This is repeated until all matters are closed.
8. The audit terminates. Report is written and filed.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:12:3
Section QUALITY AUDIT	Produced A. Wilinger	Audited	Approved A. Wilinger	

Accounts

The result is accounted for (QMH 12:5-7) and communicated to the responsible for the department. (See filled example enclosure 1-3). The responsible informs in the action plan the actions to be taken, when these are to be attended to and responsible for the actions. The plan shall be signed and returned the responsible auditor within three weeks.

New audit will be performed later in order to control that the actions are carried out and that results can be measured, i e the actions have given lasting effect and the action prevent the discrepance to re-appear. The auditor verifies this in QMH 12:6-7. All discrepancies must be attended to according to above before the audit is considered completed.

Distribution

The audit protocol is distributed (except to the responsible at the audited department) to resp quality manager and to the quality director.

Responsibility

Responsibility for establishing audit plan at the factories and appointing auditors in charge lies on resp quality manager. Responsible auditor appoints assisting auditor (as far as possible consideration must be taken to disqualification when auditors are appointed).

The quality managers are also responsible that the audits are performed according to plan. The quality director has the corresponding responsibility on management level. The quality director is also responsible for the co-ordination of the total activity regarding quality audit within GA.

Responsible for the audited department is responsible that action plans are communicated with the auditor, that actions are added according to plan and that all concerned co-workers are informed in a suitable way about all internal audits in the department.

QMH 12:4	ED: 1
Approved (Sign) Anders Wilinger	Date 99-01-15

AUDIT PLAN

Company / Unit / Dept	Client / Assigner	Responsible for audited unit	Page: 1 (1)
Audit resp	Auditors		
Date for audit	Plan established (date & signature)		

Time	*Activity*

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:12:5
Section QUALITY AUDIT	Produced B. Asplund	Audited	Approved A. Wilinger	

QMH 12:5	ED: 1
Approved (Sign) Anders Wilinger	Date 99-01-15

CHECK LIST – quality system audit

Company/unit/dept	Audit date	Audit leader

Pos	***Reference***	***Question***	***Observation***	I	MA	MI

(I) Improvement proposal (MA) Major deviation (MI) Minor deviation

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. Nr. QMH:12:6
Section QUALITY AUDIT	Produced B. Asplund	Audited	Approved A. Wilinger	

QMH 12:6	ED: 1
Approved (Sign) Anders Wilinger	Date 99-01-15

REPORT QUALITY AUDIT

Company/Unit/Department	Dept. resp.	Other contributors
Established by	Date	Edition / Distribution

Extent of audition

- ☐ 4.1 Management resp
- ☐ 4.2 Quality system
- ☐ 4.3 Contract review
- ☐ 4.4 Design control
- ☐ 4.5 Document and data control
- ☐ 4.6 Purchasing
- ☐ 4.7 Customer supplied product
- ☐ 4.8 Product identification and Traceability
- ☐ 4.9 Process control
- ☐ 4.10 Inspection and testing
- ☐ 4.11 Control of test equipment
- ☐ 4.12 Inspection and test status
- ☐ 4.13 Control of nonconforming pruducts
- ☐ 4.14 Corrective and preventiv actin
- ☐ 4.15 Handling, storage, packaging
- ☐ 4.16 Control of quality records
- ☐ 4.17 Internal quality audit
- ☐ 4.18 Training
- ☐ 4.19 Servicing
- ☐ 4.20 Statistical tecniques

Amount of divergences according to enclosed reports		Amount of suggested improvements
Major	**M**inor	

Conclusion

Activity program latest (date)	Signature responsible auditor

Audit completed – all discrepancies attended to and re-audited

Sign. dept. resp.	Date	Sign. auditor	Date

QMH 12:7	ED: 1
Approved (Sign) Anders Wilinger	Datum 99-e1-15

NONCOMFORMITY REPORT

Company/Unit/Dept		No	**(L)**Major /**(S)** Minor
Produced by	Date	Reference to discrepancy	

Discrepancy

Sign. dept. resp. | Sign. auditor

Action suggestions

Actions performed

Sign. dept. resp. Date

Action follow up

Sign. dept. resp. Date | Sign. auditor Date

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:12:8
Section QUALITY AUDIT	Produced A. Wilinger	Audited	Approved A. Wilinger	

PROCESS AUDIT

Aim
Process audit will be a part of the internal quality audit. Process audit will be performed more frequently (≥ 1 time/six months) than scheduled audits. (To be adjusted to needs.)
The audit shall be announced with relatively short notice (0-7 days) in order to reflect the actual situation in the business. The audit aims to secure that all processes within GA's total business are pursued correctly, i e that decided instructions are followed. The audit shall be aimed against processes, i e work places connected to the processes.

Following objects will be reviewed:(min)

1 Work place	Appropriate workplace, illumination, tidiness and cleaning
2 Work instructions	Correct edition? Are instructions followed?
3 Process instructions	Correct edition? Are instructions followed?
4 Package -"-	Correct edition? Are instructions followed?
5 Control -"-	Correct edition? Are instructions followed?
6 Personnel	Is the personnel correctly informed?

Accounting
Accounting is carried out in the same way as system audits.

Customer specific process audits
Customer specific process audits are performed according to customer's desire. The customer's document (list with questions) should be used if available.

PRODUCT AUDIT
See local manuals.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:12:9
Section QUALITY AUDIT	Produced A. Wilinger	Audited	Approved A. Wilinger	

AUDITORS

Within GA there are some trained auditors who have the authority to perform internal quality audits. Auditors are:

Management:

Paul Öhman
Ulf Larewall
Hans Scharin
Anders Wilinger

Simrishamn

Nils-Ivar Andersson
Ove Jarltoft
Karl-Göran Nilsson

Olofström:

Karl-Jörgen Karlsson
Per Thulin

Kristinehamn:

Ernst Bürger
Jan Bodin
Björn Asplund

Uddevalla:

Håkan Starkman

The requirement on an internal auditor is that they have experienced an education, which leads to authority to perform internal audits according to quality standard ISO 9001.
(Normally the education takes at least three days and is performed by a wellknown training institute).
The auditors' knowledge is secured as follows:

1 The auditors perform at least two audits a year.
2 The auditors work in teams with at least two persons.
3 The composition of the teams varies in order to receive best possible exchange of experiences.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:13
Section DOCUMENT CONTROL	Produced A. Wilinger	Audited	Approved A. Wilinger	

DOCUMENT CONTROL

Document control is an important part of the quality system. This refers specially to documents that directly effects the production quality.

GA has a system for document control so invalid documents or documents no longer in system never occurs in the company.

Document control must follow routines as follows:

1 Before edition the document must be reviewed by authorized personnel, dated and signed.

2

Following documents are included in the system:

Document:	**Responsible: (Authorized)**
Quality manual HQ	Quality director
Quality manual SH	Quality manager SH
Quality manual KH	Quality manager KH
Quality manual OM	Quality manager OM
Quality manual UA	Quality manager UA

For each document a distribution plan must be available. The plan is updated continuously.

More information is found in the local manuals.

FILING PROTOCOLS AND ACCOUNTED DOCUMENTS

Document /filing 3 years:	**Responsible:**
Prot. from internal audit	Qual dir./Qual mgrs
Prot. from mgm. review	Qual dir/Qual mgrs
Prot. from benchmarking	Resp. responsible. See QMH 8:4 under 'Responsibility'

Further in local quality manuals.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:14
Section EDUCATION	Produced A. Wilinger	Audited	Approved A. Wilinger	

EDUCATION

Education is considered a strategic activity within GA. This means that appropriate education for all personnel is identified and planned by the management as well as allocating resources for this.

GA has a routine to guarantee all co-workers' competence when it comes to necessary knowledge and skills to manage the tasks to be performed.

The routine involves identification of needs and performing necessary education. It also involves evaluation of the effectiveness of the education.

It rests on respective department manager within all units at GA to guarantee that the routine is carried out for all personnel at least once a year.

It also rests on the managers to give priority to quality (tools and methods) and guarantee that necessary education is planned and performed for all personnel especially regarding quality.

The personnel department works as support regarding designing appropriate education and compiling performed education. The personnel department is also responsible for the introduction program for new employed personnel and for necessary education in this connection.

Document ”Position demands and education plan” shall be used. See QMH 14:3-4.

The routine is as follows:

1. Make notes about what education, schools, classes resp individual has.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:14:2
Section EDUCATION	Produced A. Wilinger	Audited	Approved A. Wilinger	

2. Find out personal desires and future direction.

3. Establish actual claim profile for each position.

4. Establish if the individual employee corresponds actual claim profile.

5. Plan necessary education.

6. Perform planned education. Verify the performance by making note of date.

7. The person who experienced the education makes notes with a signature if the education had intended effect. (Was the content in the education correct? Did I understand and did I apprehend the information?).

8. Closest superior notes with a signature if the employed has improved in competence as planned.

QMH 14:3 Sign...
Date 981005 Ed 1

POSITION DEMANDS AND EDUCATION PLAN

Position .....

Employee no .....

Name .....

Social security no .....

1 Education/Schools/Classes

.....

.....

.....

.....

.....

.....

2 Personal desires and future alignment

.....

.....

.....

.....

3 Requirement profile for concerned position

4 Fulfills demands
Yes No

.....

.....

.....

.....

.....

.....

.....

.....

.....

5 Planned education	6 Carried out Date	7	8
.....			
.....			
.....			
.....			

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:15
Section	Produced	Audited	Approved	
SERVICE	A. Wilinger		A. Wilinger	

SERVICE

Service, installation or maintenance is not specified as demands on products delivered from GA.

This applies to all units at GA.

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 01 15	1	1	QMH:16
Section	Produced	Audited	Approved	
STATISTICAL METHODS	A. Wilinger		A. Wilinger	

STATISTICAL METHODS

Following methods are applied within GA:

CAPABILITY ANALYSIS

STATISTICAL PROCESS CONTROL (SPC)

STATISTICAL QUALITY CONTROL

FMEA

Detailed description can be found in local quality manuals.

Document QUALITY MANUAL HQ	Date 99 01 15	Edition 1	Page 1	Reg. No. QMH:17
Section SPECIFIC PROCESSES	Produced A. Wilinger	Audited	Approved A. Wilinger	

SPECIFIC PROCESSES

The result of GA's processes can be totally verified by following control and product test. Continuous supervise and control of so called Specific Processes does not exist.

When gradually new projects are planned all included processes are reviewed in order to find out if one or some of them fulfil the criterion for SP.

If so the processes are to be performed by specially qualified personnel and/or under continuous overview and control of the process parameters in order to secure that specified demands are fulfilled.

Special attention must be taken when establishing process parameters. These must be optimized so a so called robust process is obtained. DOE (Design of experiments) will be applied.

If the criterion for SP is fulfilled project leader/TS must contact the quality director to receive information about rules and methods.

Document	Date	Edition	Page	Reg. No.
QUALITY MANUAL HQ	99 08 15	1	1	QMH:18
Section	Produced	Audited	Approved	
GA'S AGREEMENT WITH THE NOTIFIED BODY	A. Wilinger		C.Palm	

GA'S AGREEMENT WITH THE NOTIFIED BODY

NB 1
GA documents all possible criticisms pointed at GA's quality system.

The documentation is kept available for the notified body Bureau Veritas QI.

NB2
So called agency activity does not exist at GA.

NB3
See QMH 13.

NB4
Demands from authorities on GA's products sometimes occur. The information about this is found in resp local quality manual.

Kungälv 99-08-15

Christer Palm
President

Anders Wilinger
Quality director