Verband der Automobilindustrie e.V.

VDA-Standardized process for handling customers' complaints

VDA QMC
Qualitäts Management Center
im Verband der Automobilindustrie

VDA Verband der Automobilindustrie

Joint Quality Management in the Supply Chain

Quality assurance during the product life cycle

- Standardized process for handling customers' complaints

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List of illustrations

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This document is intended to provide support in meeting increased requirements relating to quality work, by improving communication and thus leading to a strengthening of the competitiveness of the companies involved.

Oberursel, September 2009

Verband der Automobilindustrie e.V (VDA)

Preface

Purchasing activities in the automobile industry have become international and its production plants are now located around the world. This has created the demand for the same quality management standards and processes world-wide. Ever-closer partnership and cooperation between customer and supplier are an essential requirement in maintaining global competitiveness.

Close cooperation between customer and supplier must be regulated by specific agreements. This present guideline gives appropriate recommendations and advice with regard to the reject handling process – in particular regarding the electronic exchange of information/data using a standardized XML interface in accordance with the **QDX** format (**Q**uality **D**ata e**X**change) issued by the VDA-QMC.

The references to individual DIN standards and their issue dates are made with the permission of the DIN Deutsches Institut für Normung e.V. The standards with the latest issue date apply in all cases and can be obtained from Beuth Verlag GmbH, 10772 Berlin.

1 Introduction

The management of rejects includes not only the communication of rejects (deviations from defined requirements) but also the handling of reject items. In particular, it covers the planning, execution and monitoring of all actions taken by the supplier with regard to the complaint. In this, the analysis of failures of the reject goods or services plays an important role.

The procedure in dealing with a reject is usually documented by the 8D report, which is sent by the supplier to the customer as the answer to a complaint. However, in-house complaints and rejects can also be handled using this process. The reject handling process regularly involves production, purchasing and logistics departments in addition to the quality function. The sales department is also frequently involved.

Linking reject management with the quality-related data in a computer-based system (CAQ[1]) can lead to a significant reduction in reject costs, particularly where the data relating to the reject are also exchanged directly between the supplier's and customer's systems by electronic means, using a standardized format such as QDX, rather than being transmitted manually to the relevant systems.

The overall objective of reject management and, therefore, the objective implicit in the reject handling processes described in this present guideline, is to re-establish customer satisfaction and to minimize the negative effects of the initial dissatisfaction – that is, the loss of the customer, damage to the supplier's image, etc. Integrating both the supplier and the customer in the reject handling process also increases the efficiency of that process. The comprehensive documentation of the resolution of a failure (using a system protected against media breaks) and by reducing processing times, the occurrence of rejects and the associated costs can be reduced significantly.

Equally, a customer's reject can be used s the starting point for improvement actions within the company (the continuous improvement process).

[1] CAQ = Computer Aided Quality Assurance

1.1 The problem

Over recent decades there has been a massive shift in the automobile industry of wealth creation (added value) from the OEM to the supplier and this tendency is still continuing to an increasing degree. Technical innovations and, above all, the increasing number of electrical/electronic components also increase the complexity of the overall vehicle. However, the result of this is that the proportion of failures caused by the supplier is also constantly rising. For this reason, recent years have seen ever more attention paid to (external) reject management. To support their quality assurance functions, companies have installed professional IT systems (CAQ systems) in order to handle rejects (complaints and returned parts).

The exchange of information between customer and supplier regarding rejects was initially (and is still to a degree) in paper form. However, many OEMs and also the larger suppliers have installed portals, which their (sub) suppliers can use for the direct inputting of information (findings) regarding rejects. This is generally in the form of an 8D report.

From the (sub) supplier's standpoint, however, this is not a satisfactory solution, because they have to enter the data regarding the reject and/or an 8D report both into their own CAQ system and into that of the customer. Media breaks occurring initially in the communication between OEM and supplier were resolved only on one side by introducing portals. In order to minimize the amount of work for the supplier in reject management and, thereby, to provide the supplier with support, several OEMs and also a number of large suppliers provide an interface for the electronic exchange of data involved in the reject handling process, based on **QDX**.

However, connecting to a QDX interface revealed a number of areas where the definition of communication between customer and supplier were not clear. One of these is the complexity of the reject handling process. On the surface there appear to be only two process stages :

1. The customer complains to his supplier that there is a defect.
2. The supplier eliminates the defect and sends the associated documentation back to the customer in the form of an 8D report.

When the reject handling process is studied in detail, however, further essential process stages can be identified, examples of which are :

- The customer's reaction to the 8D report
- The withdrawal or cancellation of a reject
- The closure of a reject
- etc.

Because the detailed process stages had not been described up to this point, each customer (OEM and supplier) implemented them according to individual judgement. In many cases this led to massive differences in the reject handling processes used by the customer and supplier and, therefore, equally significant differences in communications between the parties. Furthermore, suppliers needed to establish separate connections with each of their customers.

The other incomplete area in defining communication between customer and supplier was the lack of a description of the technical execution of the interface (for example, which communication protocol is to be used). This matter was considered by a sub-working group of the VDA-AK7 ("Transport and Communication“), which specified the technology for data exchange.

1.2 Objective

The objective of this present guideline is to describe the reject handling process between customer and supplier and thereby to eliminate the areas of weakness covered in Section 1.1 above. The emphasis and main objective will be to describe the communication between customer and supplier in this way to identify the interfaces for electronic data exchange via QDX.

To this end, Section 2 defines the reject handling process. Following a description of general requirements and an overview of the overall process, the individual process stages are described. Emphasis is given here to the communications interfaces between customer and supplier.

Following on from this, consideration is given to the QDX documents (Section 3) to be used for exchanging data. The emphasis here lies on the status of the reject handling process which is transmitted and the interpretation of this status.

1.3 Associated standards and VDA publications

The contents of this present guideline were agreed in intensive discussion with the associated working groups (AKs) in the VDA-QMC. These included AK 4 ("Securing quality during the product creation – methods and procedures"), AK 6.3 ("Process audits in full production"), AK 7 ("Quality Data Exchange – QDX"), the "Zero defects culture" working group and the "Defective parts analysis" working group.

In addition there are points of reference to company-specific specifications and independent regulatory works such as ISO/TS 16949.

1.4 Customer-specific requirements

Customer-specific requirements and stipulations always take precedence over this present guideline. The contents of this guideline become binding on the supplier only when compliance with the reject handling process described therein is demanded – for example, as part of a customer's specification or equivalent quality assurance or purchasing agreements with the supplier.

1.5 Limitations

The reject handling process set out in this present guideline is based on existing processes, methods and tools. There is therefore no reference in detail to the individual stages of the 8D report (method), nor is there a description of the contents of the QDX documents used (tool)[2].

The establishment of an electronic data exchange for transferring data regarding rejects (rejects documents) is covered in detail in the guideline published by the VDA-QMC entitled "Transport and communication of QDX information".

[2] The only exceptions are the data fields which have an influence on the process (such as status fields, acceptance fields, etc.).

2 The reject handling process

Before describing the reject handling process dealt with in this present document it is first necessary to define a number of general requirements (Section 2.1) covering the process, such as the definition of deadlines.

The description of the overall process takes place in two stages :

1. Initially a description is given of the context of the process operations within the overall process (Section 2.2). The context of the two part-processes : "8D method“ and " Rejecting a complaint " is described in Sections 2.4 and 2.6.

2. There then follows the detailed description of the various process operations, broken down into the four part-processes of " Initiating the reject handling process “ (Section 2.3), "8D method" (Section 2.4), "Verification/Closure" (Section 0) und "Rejecting a complaint" (Section 2.6). Strictly speaking, the last of these is a process variant. However, as it can occur at several points within the overall process, it has been modelled as a part-process.

The illustrations provided for each individual process operation show the input required and the expected output, the person responsible for carrying out the process operation[3] and where (if appropriate) an exchange of data (communication) with the other party takes place[4] via QDX (for details on communication via QDX see Section 3).

Where appropriate and necessary, the present process description also considers the important support processes which are launched as the result of a complaint or reject but which, in classical terms, are not part of quality management. In this way it is intended to show clearly where interfaces exist to logistics processes (for example, the return of goods) or sales-related processes (issuing of debit notes, for example.

[3] The party responsible for carrying out the operation is listed under "**D**“.

[4] The party to be informed is listed under "**I**“.

2.1 General requirements

It can be seen as a general requirement that both parties (customer and supplier) comply with the process which has been agreed.

For example, it is essential for the rejected goods to be made available to the supplier for examination at the right time (as quickly as possible). Only by an examination of the rejected goods will it be possible to say, for example, whether the item in question has in fact been made by the supplier against whom the complaint has been directed. Furthermore, only a physical examination of the item can confirm whether the supplier is to blame for the problem – the defect may have been caused by an assembly problem or by transport damage, etc.

Agreement should be reached between customer and supplier on the exchange of data relating to the reject and such an agreement will exceed the scope of the stipulations set out by the VDA. It will include agreement on additional obligatory fields (which are declared merely as optional in QDX) and the definition of data formats and their field lengths.

If the customer defines further optional QDX data fields as obligatory, these must be completed by the supplier and dealt with in technical communication in exactly the same way as QDX obligatory fields. This means that not completing such data fields will cause the transmission process to break down. However, defining customer-specific fields (which therefore become obligatory) should be carried out with caution as they may have massive effects on the technical integration process.

Transmission systems generally record which documents have been sent to the other party. However, if the transmission was not successful, the party must have the facility to initiate a repeat transmission of the data.

2.1.1 Process owner

In terms of the overall process and the inter-active process (the communication process) the customer may be defined as the process owner. It is the customer who initiates the process and defines the deadlines. Because the customer receives the result of the activity (the completed documentation of the elimination of the defect), he is also the process customer, who may be expected to have the greater interest in the successful execution of the process. However, the customer is a restricted process owner, since he neither has access to, or decision-making authority over the resources of his business partner, the supplier.

The process owners of the individual process operations are defined within the individual process operations and are identified as the party responsible for making decisions (abbreviated to "E"). If that party is not present, the process owner of the individual process operation is identified as the party responsible for carrying out the relevant activities (abbreviated to "D").

The process owner of the overall process defines the partnership agreements, in which (for example) the obligatory fields to be completed in the QDX documents are specified.

Experience shows that, where there is any lack of agreement, it is the customer who has the last word. If discrepancies of this kind cannot be resolved at an operational level, the matter must be escalated by both parties on a hierarchical basis in order to arrive at a common solution. However, this should be the absolute last resort.

2.1.2 Timing deadlines

This present document is general in its validity and does not define any special timing deadlines. Deadlines for the supplier in regard to findings relating to the causes of failure, corrective actions, etc. are defined in the customer-specific requirements (partner agreements) mentioned in Section 1.4. Typically, however, customers expect initial feedback within 24 and 48 hours on immediate and interim actions.

It should be specifically pointed out that the supplier can provide his findings only if sufficient information[5] is provided to him within the period specified by the customer, on the basis of which he can begin the analysis process. Thus, for example, if the supplier is not provided in good time with the suspect parts, he cannot analyse the problem and will therefore be unable to draw any conclusions in terms of commercial acceptance[6] within the specified period.

The deadline set by the customer for feedback must therefore be placed "on hold" for the duration of this period. The supplier must agree any extension to deadlines with the customer (except for communication via QDX).

If the customer has communicated deadlines to the supplier, the supplier must state these in the 8D report (under "Planned End-Date Time" or "Due Date Time"). The supplier is not permitted to change these deadlines.

Note : In addition to the usual deadlines for the individual stages of the 8D report, the customer also sets a deadline for commercial acceptance. If the supplier does not respond to this before the specified deadline, the commercial acceptance figure proposed by the customer is generally taken as valid once the deadline has passed and can normally not be corrected. Suppliers are therefore recommended to reach early agreement with the customer on the consequences of not meeting this deadline.

2.1.3 Acceptance of the reject

Acceptance of the reject by the supplier takes place on two levels :

- **Technical acceptance :** The supplier accepts that he is the cause of the failure.

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[5] "Sufficient information" means that the complaint must be described in as much detail as possible. It may also be necessary to provide one or more defective parts.

[6] "Commercial acceptance" does not refer here to the commercial process in the general sense. Within the framework of the reject handling process an acceptance of the commercial consequences by the supplier is required. However, this should be regarded as a proposed figure. The proposed figure for commercial acceptance by the supplier is based on the technical analysis carried out by the supplier.

- **Proposed commercial acceptance :** The supplier accepts the customer's proposal regarding the commercial claims arising from the reject[6].

The breakdown or differentiation into technical and commercial acceptance is necessary because cases falling outside the warranty period must be considered, as well as cases involving goodwill. The table at the end of this section illustrates possible examples.

Technical acceptance by the supplier can be issued when transmitting data via QDX, using the data field "ComplaintItemStatusCode“ (Step D2 of the QDX 8D report). The following status codes are defined for this :

- **Accepted :** The supplier accepts the complaint because the failure or defect was caused by him.
- **Not Accepted :** The supplier does not accept the complaint because the failure or defect was not caused by him.
- **NoTroubleFound :** The supplier does not accept the complaint because he was unable to detect a fault in the product. The product meets the relevant specification.
- **Pending :** The supplier is not yet able to make a statement because he has not yet been able to identify the fault or its cause.

In addition, the data field "Quantity“ can be used to enter the quantity of parts to which the status code in question applies. If the quantity entered here is not the total quantity of products which were originally rejected, this indicates that at least one further 8D report on the problem will be issued. If the quantity entered is the same as the total quantity originally rejected, no further 8D report on the problem may be expected[7].

[7] This refers to further, separate 8D reports on the complaint or reject, dealing for example with a different defect or failure. It does not mean any up-dates of an 8D report, which are merely a new version of an existing 8D report and therefore do not represent a separate, new 8D report.

In practice, commercial acceptance is also an integral part of the reject handling process. It should be issued at latest by the end of the root cause analysis stage (D4). Once commercial acceptance has been issued, it can normally not be modified at a later stage (see Section 2.4.2). The data field „ComplaintAcceptanceIndicator“ (Step D2 of the QDX 8D report) should be used if commercial acceptance is issued via QDX. The status codes for this field are :

- **True:** The supplier accepts the commercial demands issued by the customer in connection with the complaint or reject.
- **False:** The supplier does **NOT** accept the commercial demands issued by the customer in connection with the complaint or reject.

For commercial acceptance a quantity must also be entered in the data field "AcceptedDefectiveQuantity". This quantity may be the same or less than the quantity accepted as part of the technical acceptance but it cannot be greater.

It is important to consider the terms of the partnership agreement when issuing a commercial acceptance. With some customers it is not possible to withdraw or modify the commercial acceptance once it has been issue. The supplier's representative should therefore be very sure of the facts before issuing a commercial acceptance to the customer. In addition it is important to comply with the deadlines specified by the customer (see Section 2.1.2).

The following table describes a number of examples of acceptance by the supplier and the way the fields should be completed :

Description of the problem (10 rejected parts)	Technical acceptance		Commercial acceptance	
	Status code	Qty.	Status code	Qty.
A failure has occurred within the warranty period. The failure is caused by the supplier.	Accepted	10	True	10
A failure has occurred outside the warranty period. The failure is caused by the supplier.	Accepted	10	False	0
A failure has occurred outside the warranty period. The failure is caused by the supplier. The supplier accepts half as goodwill.	Accepted	10	True	5
A failure has occurred. It is not caused by the supplier.	Not Accepted	10	False	0
A failure has occurred. It is not caused by the supplier. The supplier accepts however as goodwill.	Not Accepted	10	True	10
A failure has occurred within the warranty period. The supplier is responsible for the cause in only 50% of the parts. For the other 50% the supplier accepts as goodwill. The matter is split into two 8D reports.	1: Accepted 2: Not Accepted	1: 5 2: 5	1: True 2: True	1: 5 2. 5

Note : If "False" is entered in the "commercial acceptance" status code field, the associated quantity must always be shown as "0“.

2.1.4 Reject document and 8D report

Data exchange

The reject document and the 8D report must be regarded as "living documents“. They may therefore both be up-dated or changed completely at any time (the only exception is the commercial acceptance in the 8D report; see above). Particularly with regard to steps D1 and D2 in the 8D report, which must be constantly expanded/up-dated, it is absolutely essential to be able to up-date the 8D report at any time.

The two parties (customer and supplier) can decide freely how often a reject document and/or an 8D report is up-dated and sent to the other party – for example, this might be after each "D" step in the 8D report.

Within the framework of this present document, the "wholesale" principle should apply to the exchange of data – that is, all the data fields of a (QDX) document are always transmitted via QDX. Both parties must therefore ensure that QM employees always look at and check **ALL** the information afresh when up-dated QDX documents are received. Ideally, however, the receiving system should automatically recognize and identify all data fields where the contents are different from those of the previous version.

Here an in-house decision must be made as to whether older information is over-written or whether it should be saved and stored alongside the current version. No specific recommendation is made in this current document, as both alternatives have advantages and drawbacks. However, to ensure comprehensive documentation there should be at least an historical record of the data transmitted and received. Independent of this, consideration should be given to archiving, in view of legal requirements.

Feedback to the 8D report

The customer can provide feedback to the intermediate steps in an 8D report but he is not obliged to do so. Only when the completed 8D report is transmitted is the customer obliged to provide feedback. On the customer's side this procedure should be implemented in the CAQ systems (ideally in an automated manner).

Closing the reject document

If the 8D report is accepted by the customer and the reject document is closed, the supplier may assume that the customer thereby also confirms the effectiveness of the 8D report. On the supplier's side, therefore, the process regarding the reject document can also be closed. However, if the corrective actions come into force only after a comparatively long period, it is the supplier's responsibility to monitor the effectiveness of these actions. If new rejects occur, because of the same failure, after the corrective actions have been introduced, these are handled as repeat failures (for the exact definition of a repeat failure[8] see Section 4) and a new reject document must be issued. This also means that the customer cannot simply reactivate a reject document. A new reject document must be raised for repeat failures.

Relationship between reject document and 8D report

Combining different, individual rejects to form a collective reject document (a "QDXComplaint") creates significant problems for the supplier in terms of the electronic data processing involved. Within the framework of this current document, therefore, it is strongly recommended that the customer always operates on a 1:1 communication basis – in other words, one "ComplaintItem" in each "QDXComplaint".

Where several failure modes occur with regard to a complaint, it may be necessary to raise several 8D reports. The customer must therefore ensure that the associated CAQ systems are able to receive and process several different "QDXReport8D" responses regarding a single "QDXComplaint".

So that the customer can see whether several 8D reports or reports of findings will be issued for a single reject report (and whether further 8D reports are to follow) the technical acceptance must also include a statement of the quantity accepted from the technical standpoint :

[8] Important : Repeat failures are generally treated more severely by the customer than normal failures (in terms of ppm rates, supplier assessment classification, etc.)

- If the quantity stated in the report of findings is not the same as the total quantity in the original reject document, further reports of findings are to follow.
- If the quantity stated (or the sum of the quantities in all 8D reports received previously) is the same as the total quantity in the original reject document, no (further) reports of findings are to follow.

JIT/JIS parts

Where a reject involves JIT/JIS parts and no in-house part-numbers are used for JIT/JIS parts, the components contained in the JIT/JIS part must be listed, with their part-numbers (this is required both for logistics and finance systems). A reject report (a "Complaint") with a reject item number must then be sent via QDX to the supplier and, in this "Complaint" the customer must state the part-numbers of the components contained in the JIT/JIS part ("IncludedProductItem" within the "AssemblyProductItem"). The components can also be stated, even if the JIT/JIS part has its own part-number which can be quoted.

This applies, however, to a single reject item, to which the supplier is required to respond with an 8D report (the only exception is where several failures have occurred in the one part).

Extent / ramifications of the problem

If the customer finds that a failure also occurs in another product of the same type or design, the customer can combine both these rejects (or more) in a single reject reference. This may be necessary, for example, if the defect occurs in parts having different colours. Here the customer must define a "master" part. All other parts (colour variants) must then be listed under "further parts affected" ("ConcernedProductItem").

Because this is essentially a single reject or failure, the supplier will reply with a single 8D report (except where different failures are involved).

2.2 Overview of the entire process

The reject handling process is also launched where there is a (potential) deviation from defined requirements. To determine this, the customer has usually already carried out a provisional analysis or reached provisional conclusions. The customer communicates the deviation to the supplier. Following an initial, provisional check on the deviation, the supplier decides whether the complaint is really justified or whether it should be rejected[9] (for example, because he is not the supplier of the part in question). If the supplier cannot reject the complaint, he will carry out the elimination of the defect, using the 8D method (see Section 2.4).

After the defect has been finally eliminated using the 8D method, the customer checks the 8D report. If the customer refuses to accept the 8D report, the supplier is required to produce further conclusion regarding the complaint (stating the reasons why the customer rejected the previous 8D report).

Otherwise, the customer may carry out a check on the effectiveness of the corrective actions. If the corrective actions introduced by the supplier are not effective, the 8D report is rejected as "ineffective". On the other hand, if the actions were successful in eliminating the defect, the effectiveness of the 8D report is confirmed.

Finally, the customer closes the complaint. Once this has been done, neither the customer nor the supplier can up-date it in any way. If the defect has not been eliminated and occurs again, the customer must start a new process (raise a new reject document) and the matter must be dealt with as a repeat failure[10].

As a variant to the procedure, the customer can cancel the entire process, up to the point where the reject report is closed, if there is sufficient reason for this. Such a cancellation cannot be retracted and should, wherever possible, be regarded as an exception to the normal procedure.

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[9] The procedure for rejecting a complaint is described in Section 2.6.

[10] For a definition of a repeat failure, see Section 4.

If the customer does not require a detailed report of the elimination of the defect using the 8D method, the supplier uses "QDXShortConfirmation" to provide a brief report on his findings, to accept the reject (both technical and commercial acceptance[6]) and also to report on the corrective actions taken. A further alternative with field failures is an abbreviated 8D report (excluding steps D3, D5 and D7), which can be communicated via "QDXFieldFailureResponse".

None of these alternatives or variants is dealt with further in this present document – they are merely mentioned as part-processes.

The following process steps are identical to those contained in the 8D method. Therefore, no differentiation has been made within the individual process steps, so that the overview of the entire process does not become too cluttered. For example, a check on effectiveness would not be required if certain actions were missing and such a check would also not be carried out, as far as the process diagram is concerned (this would otherwise be called for under "check the need for an effectiveness check“).

Note regarding modelling : The starting point and possible conclusions are shown red in the process diagrams.

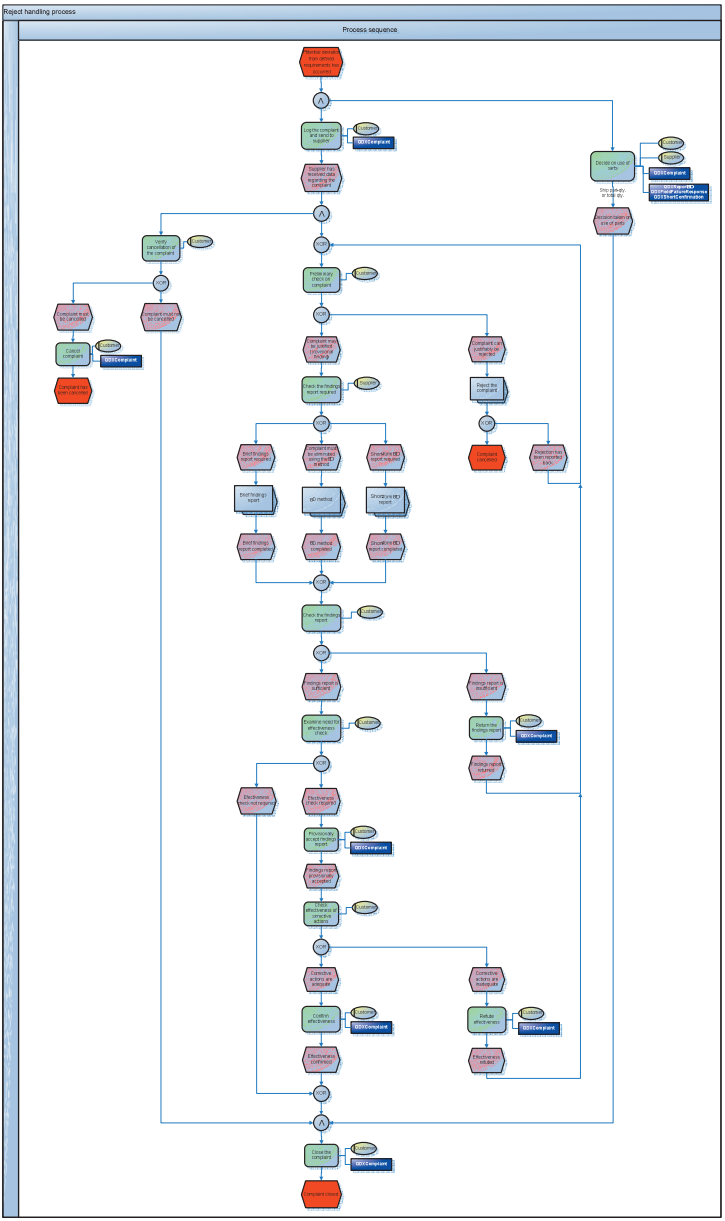

Fig. 2.2.1: Overview of the entire process

2.3 Initiating the reject handling process

For a description and illustration of the part-process, see Section 2.2.

2.3.1 Process step : "Supply details of complaint to supplier"

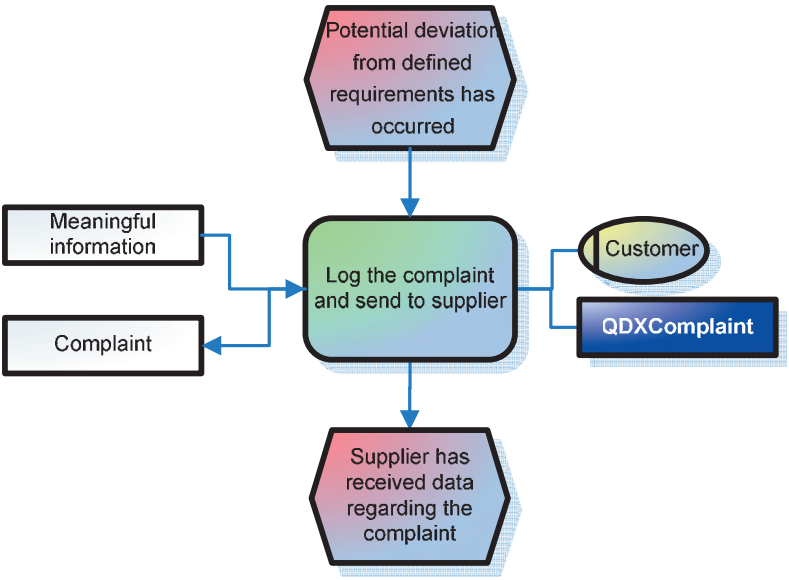

Fig. 2.3.1: Process step : "Supply details of complaint to supplier"

Title:	Process step : "Supply details of complaint to supplier"
ID:	101
Description:	A complaint may be initiated by the customer as a result of quite different events. The most typical cause is probably the presence/occurrence of goods or services which do not meet the previously defined requirements for the item(s) in question. For supplier to begin the reject handling process it is essential for the customer to provide the supplier with meaningful (comprehensive) information regarding the complaint.
Pre-conditions:	-
Cause for action:	A potential deviation from defined requirements has occurred. In the customer's opinion the responsibility very probably lies with the supplier.
Procedure:	The customer gathers all relevant information, to the quality required. The potential deviation must be described clearly and unambiguously. The details of the complaint are then communicated to the supplier.
Result:	The supplier has received the details of the complaint.
Variants:	-
Exceptions:	-

D[11]**:**	Customer
E:	-
M:	-
I:	Supplier
QDX document[12]**:**	QDXComplaint
Input[13]**:**	Meaningful information
Output[14]**:**	Complaint
Comments:	Provisional information is not explicitly supported. The term "meaningful" means that the supplier receives all possible relevant information to enable him to eliminate the defect. Otherwise it is much more difficult or even impossible for the supplier to eliminate the defect.

[11] **D =** Responsible for implementation
E = Responsible for decision-making
M = Required to cooperate
I = Must be informed.

A person responsible for implementation must always be defined for each process step. If no person responsible for decision-making is defined, this role is taken by the person nominated as "D".

[12] Title of the **QDX document** used to communicate the result of the process. Within the framework of the process description given here, the QDX document is considered to be an aid and not the "output".

[13] The **Input** field is used give all additional information/data required in order to carry out the process step.

[14] The **Output** field states the result (whether achieved or expected) of the process step.

2.3.2 Process step : " Decide on the use of the goods"

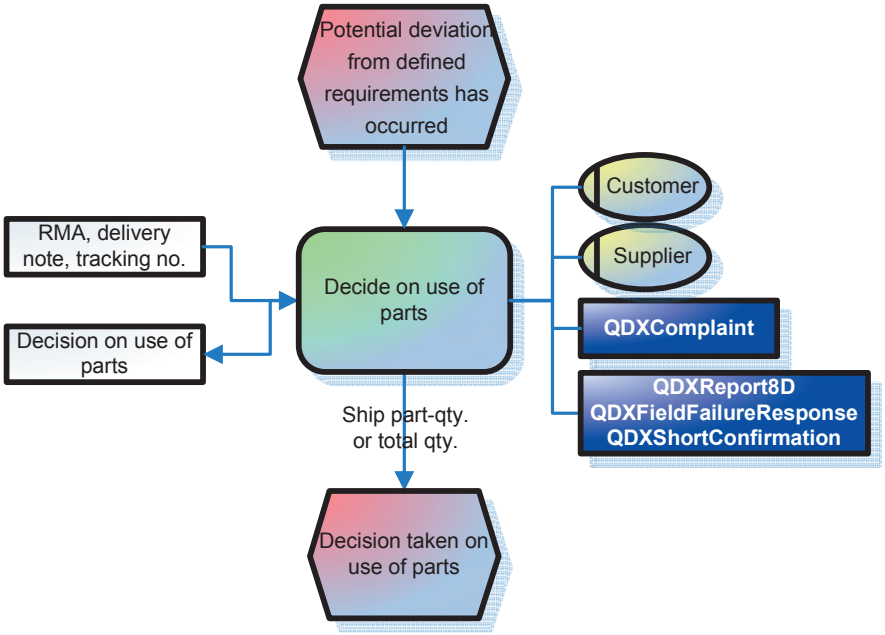

Fig. 2.3.2: Process step : " Decide on the use of the goods"

Title:	Process step : " Decide on the use of the goods"
ID:	102
Description:	A decision on the use of the goods must be agreed between customer and supplier. This decision is usually taken in a personal discussion (e.g., by telephone) but is normally also confirmed by data communication via QDX. However, the supplier can document his wishes regarding the use of the goods, using "QDXReport8D". The supplier should have "the last word“ with regard to the part for which he is blamed. However, the duty to document the decision lies with the customer. No matter what the personal agreement, the final result of the decision on what to do with the goods must be documented within the framework of the complaint and, therefore, in the customer's system (QDXComplaint). This decision on the use of the goods should be adequately detailed, so that logistics processes can be put in hand. It is possible to make a decision on the use of part-quantities of the items which have been rejected. This process step can be taken at any stage before the complaint is finally closed and may be repeated as often as desired.
Pre-conditions:	-
Cause for action:	A potential deviation from defined requirements has occurred and has been communicated to the supplier.
Procedure:	The customer agrees with the supplier on the use of the goods. The customer then documents this decision and sends it to the supplier.

Result:	This may depend on separate part-quantities : see QDXComplaint/ ComplaintItem/ DecisionCode
Variants:	-
Exceptions:	-
D:	Supplier; customer
E:	Supplier
M:	-
I:	-
QDX document:	QDXComplaint, QDXReport8D, QDXFieldFailureResponse, QDXShortConfirmation
Input:	RMA (from supplier), delivery note number / tracking number (Logistics)
Output:	(Up-dated) QDXComplaint, QDXReport8D, QDXFieldFailureResponse, QDXShortConfirmation with the following information (for each part-quantity): Quantity; coded decision on use (as QDX DecisionCode); RMA; delivery note number/ tracking number (for structure, see DeliveryReference); justification
Comments:	Agreement between customer and supplier is reached without QDX data transmission. The QDX is used merely to document the result. The supplier can propose a decision on use as part of his findings; however, it is the final decision on use which the customer documents within the framework of the complaint procedure. The QDX document used for the answer depends on what conclusions the customer has demanded from the supplier and who documents the decision on what to do with the goods.

2.3.3 Process step : "Provisional check on the complaint"

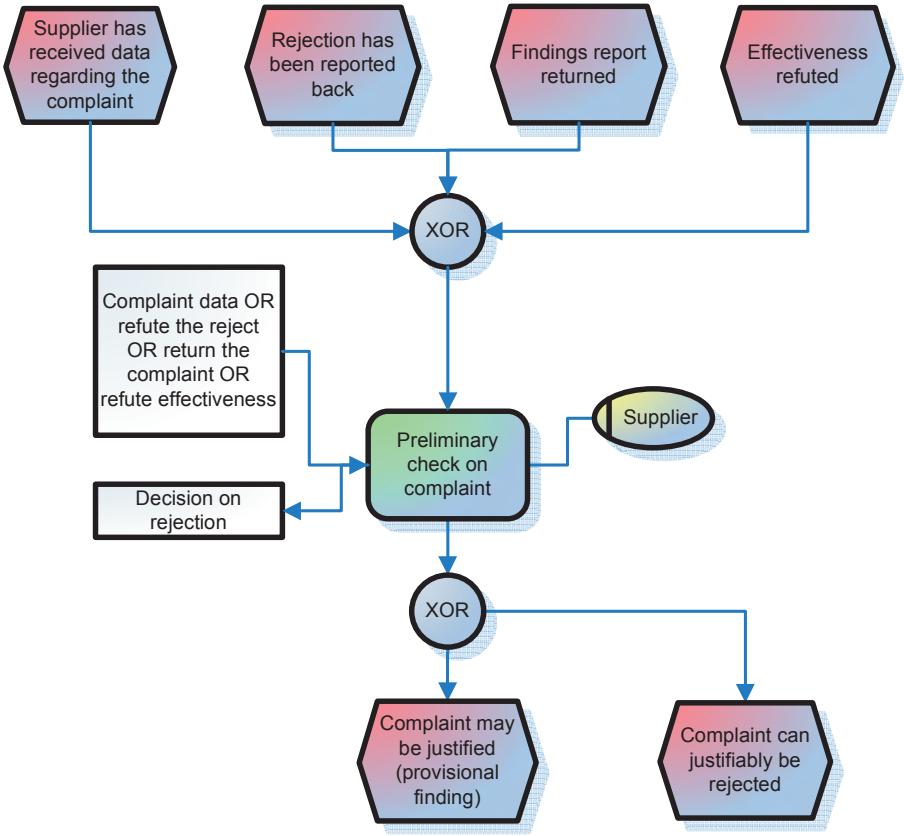

Fig. 2.3.3: Process step : "Provisional check on the complaint"

Title:	Process step : "Provisional check on the complaint""
ID:	103
Description:	The supplier checks the complaint. Here the focus is initially on whether the rejected item was, in fact, delivered by the supplier against whom the customer has made the complaint. It must also be checked whether the complaint (failure/reject) was caused by the supplier. It may have been caused by a failure in handling, transport or assembly, for which the supplier is not to blame. This check can be regarded as a rough, provisional analysis or initial inspection by the supplier. The result of this check determines the further steps to be taken.
Pre-conditions:	Data regarding the complaint must be available.
Cause for action:	- **Either:** The supplier has received data regarding the complaint. - **Or:** The supplier has rejected the complaint but this has not been accepted by the customer. - **Or:** The customer has rejected the findings. - **Or:** The effectiveness of the corrective actions has been disproved by the customer.
Procedure:	The information available (data regarding the complaint and, if appropriate, the parts themselves) are checked. Based on this, it is decided whether the complaint may be justified (provisional), or whether it can justifiably be refuted.
Result:	- **Either:** The complaint may be justified (provisional). - **Or:** The complaint can justifiably be refuted.

Variants:	-
Exceptions:	-
D:	Supplier
E:	-
M:	-
I:	-
QDX document:	-
Input:	Data regarding the complaint
Output:	Decision whether the complaint can or cannot be refuted.
Comments:	The expression "may be justified (provisional)" means that, with his first inspection, the supplier can detect no grounds for refuting the complaint. Only after a detailed analysis of the failure and its cause(s) can it be decided whether the complaint is justified or not. This is done at a later stage within the framework of the 8D method.

2.3.4 Process step : "Check the investigation method required"

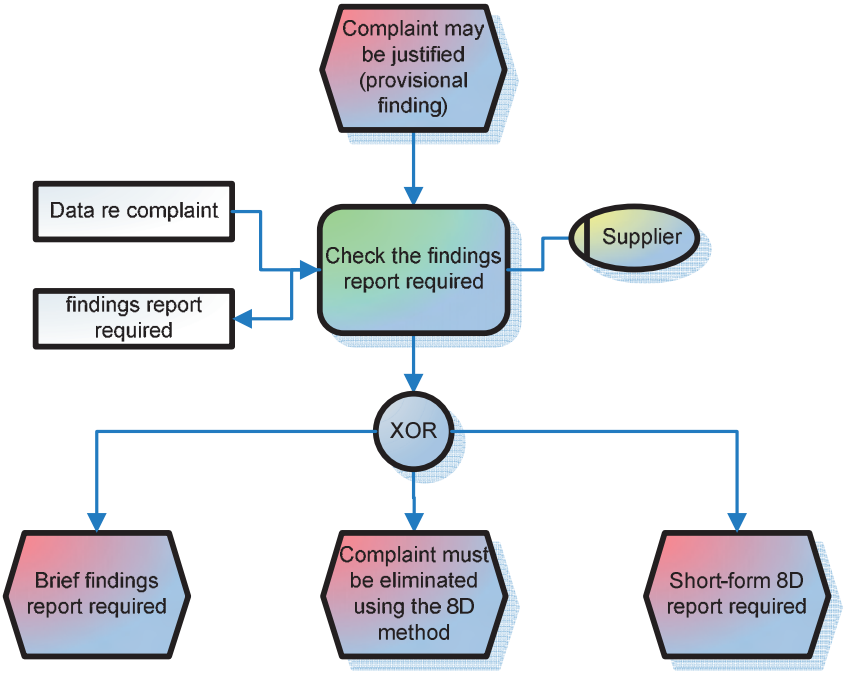

Fig. 2.3.4: Process step : "Check the investigation method required"

Title:	Process step : " Check the investigation method required "
ID:	104
Description:	The supplier checks which method of investigation the customer wishes him to use. Within the frame-work of the reject handling process it is assumed that the "8D Report“ (that is, eliminating the defect using the 8D method) is to be used. However, it is also possible that the customer needs only a brief finding (this usually applies with accumulated re-jects) or the short-form 8D method (for field failures only). Neither of these variants is described further in this present guideline.
Pre-conditions:	-
Cause for action:	The complaint may be justified (provisional).
Procedure:	The supplier checks which method of investigation the customer wishes him to use.
Result:	- **Either:** 8D method (standard) - **or:** short-form 8D method (field failures) - **or:** Brief findings
Variants:	-
Exceptions:	-
D:	Supplier
E:	-
M:	-
I:	-
QDX document:	-
Input:	Data regarding the complaint
Output:	Decision on the method of investigation to be used
Comments:	-

2.4 8D-Method

In principle there is no requirement to carry out the individual 8D steps in sequence. From the process standpoint there is nothing against completing only step D4 or step D6 in the case of field failures. Only individual steps need be carried out (as from D3), without having completed those before it. In the document "QDX-Dokument QDXReport8D" however, it is a requirement that steps D1 to D3 must be carried out. However, both the "QDXShortConfirmation" and "QDXFieldFailureResponse" und "QDXReport8D" can be used to refer to a previous (complete) 8D report.

In this connection it must be pointed out that the customer's systems must be able to process not only the cases quoted above but also the transmission of later versions of the 8D report in general.

Unlike the classic illustration in the 8D report, in practice steps D1, D2 and D3 run in parallel (simultaneously). There is therefore no need for sequential processing.

A variant of this sub-process might be (as mentioned in Section 2.2) a brief report to accept the complaint. This variant is shown in the process diagram (the entire process) for the sake of completeness; however, it is not described in any further detail in this present document.

If necessary, the supplier can send a partially completed 8D report to the customer as provisional information. This is required in particular if the customer has set a specific deadline for an individual D-step. In this case, to meet the customer's short deadline for a D-step (for example, D3) the supplier must send an incomplete 8D report to the customer as an initial reaction. The structural definitions for the 8D report must be observed in such cases (for example, a D5 action must not be defined without also defining D4 – the cause of the failure) !

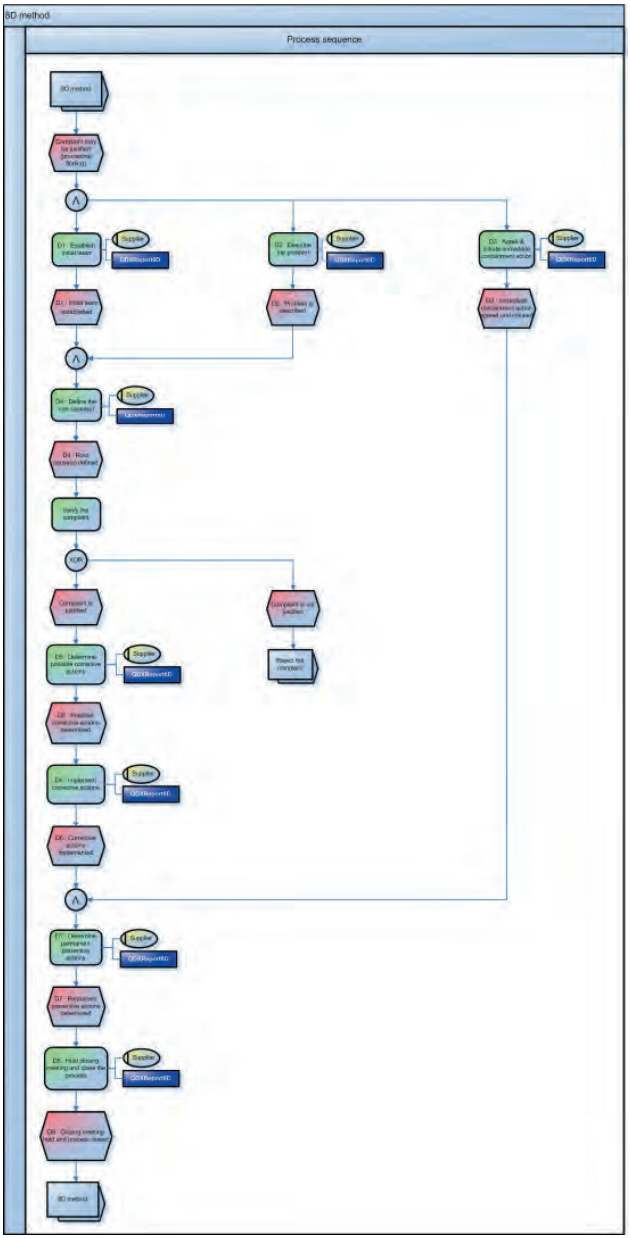

Fig. 2.4: Sub-process „8D method“

2.4.1 Process step D1 : "Establish the initial team"

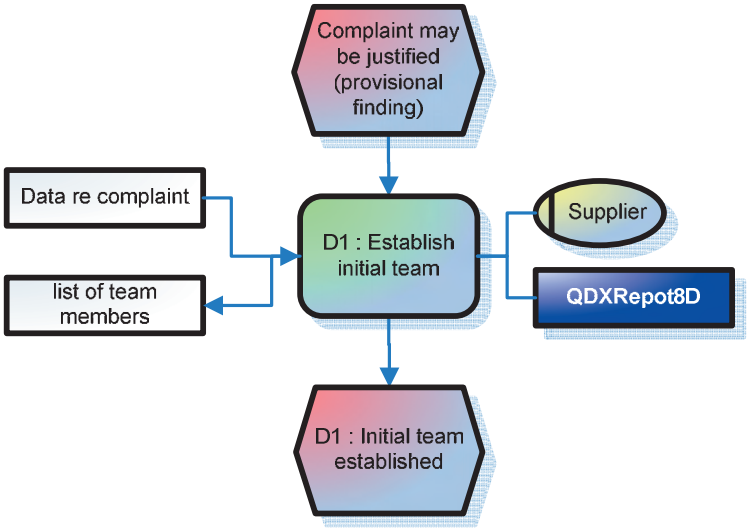

Fig. 2.4.1: Process step D1 : "Establish the initial team"

Title :	Process step D1 : "Establish the initial team"
ID:	105
Description:	Having received data regarding the complaint the supplier must nominate a team which will deal with the reject. At the beginning this team can consist of the team leader only and be extended as the matter progresses over time. However, the team leader should not change, unless in exceptional circumstances.
Pre-conditions:	Persons with the appropriate knowledge of processes/production, with the time, readiness to cooperate, with the expertise and knowledge of the techniques required to solve the problem and introduce corrective actions.

Cause for action:	There must be a complaint and this must probably be justified (the blame can reasonably be laid with the supplier).
Procedure:	Establish a small team of persons with the appropriate knowledge of processes/production, with the time, readiness to cooperate, with the expertise and knowledge of the techniques required to solve the problem and introduce corrective actions. An official "champion" must be nominated for the team.
Result:	A problem-solving team is appointed.
Variants:	-
Exceptions:	-
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D
Input:	Data regarding the complaint
Output:	List of team members (and functions if appropriate)
Comments:	-

2.4.2 Process step D2 : "Describe the problem"

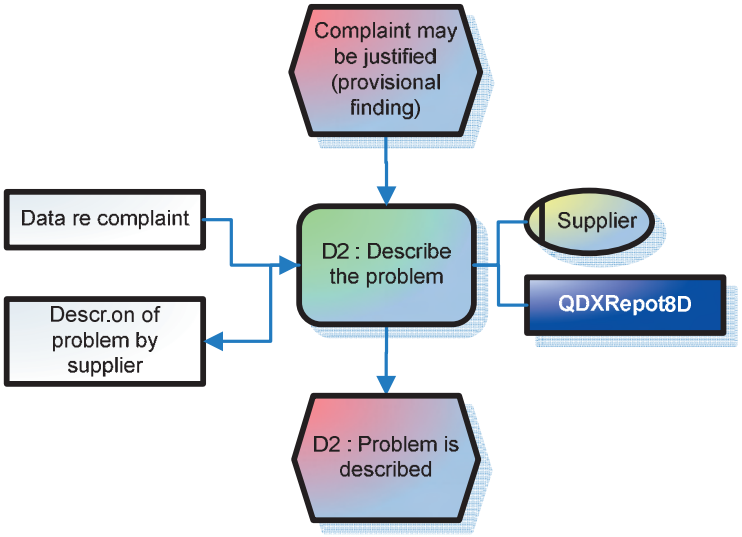

Fig. 2.4.2: Process step D2 : "Describe the problem"

Title:	Process step D2 : "Describe the problem"
ID:	106
Description:	In step D2 the problem is described from the supplier's standpoint. Because not only "technical acceptance" but also "commercial acceptance"[6] is part of the reject handling process, this is also reported in step D2. Once the supplier has issued commercial acceptance, it is generally fixed. Any subsequent changes must be communicated by the supplier and bilaterally agreed. A separate deadline is defined for the commercial acceptance.

Pre-conditions:	The suspect parts must be provided to the supplier for an analysis of the problem. As a minimum, however, detailed information (e.g., photos, description of the failure) must be provided.
Cause for action:	There must be a complaint and this must probably be justified (the blame can reasonably be laid with the supplier).
Procedure:	Define the customer's problem as precisely as possible. Work out the core of the problem and quantify it. Collect and analyse statistical data. Log and determine and the extent of the problem (the number of parts affected; versions; vehicles; etc.). Under "Problem character" a short-form entry can be made as a user-specific description (e.g., type of failure; failure code; problem classification).
Result:	The complaint/failure is described comprehensively from the supplier's standpoint.
Variants:	-
Exceptions:	No failure could be found
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D
Input:	Data regarding the complaint
Output:	Comprehensive description of the complaint/failure from the supplier's standpoint.
Comments:	The completion of step D4 (failure analysis) is the optimum trigger for commercial acceptance[6].

2.4.3 Process step D3 : "Agree & initiate the immediate containment action"

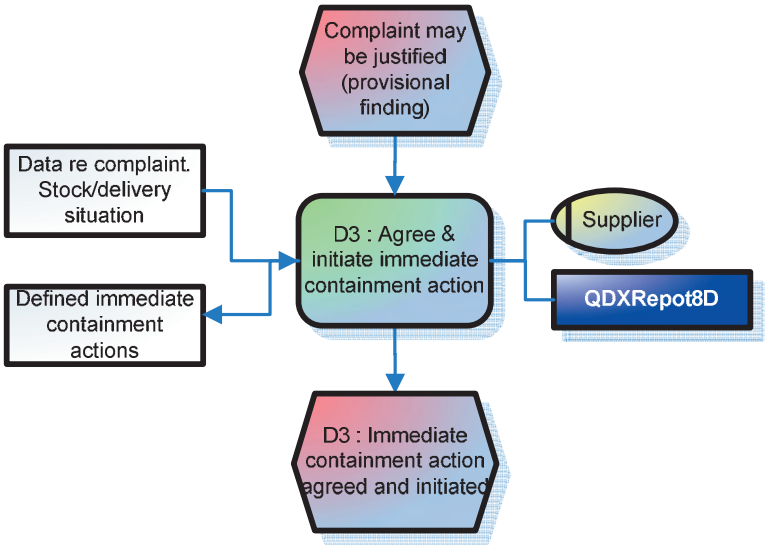

Fig. 2.4.3: Process step D3 : "Agree & initiate the immediate containment action"

Title:	Process step D3 : "Agree & initiate the immediate containment action"
ID:	107
Description:	The supplier initiates immediate or interim actions to isolate the customer as far as possible from further damage. There is a difference between "interim" and "immediate" actions : an interim action can be, for example, "shut down the machine", whereas immediate actions are employed to maintain production – for example, "100% sorting".

Pre-conditions:	An adequate description of the problem and the suspect parts are available for analysis of the failure. As a minimum, however, detailed information (e.g., photos, description of the failure) must be provided). In order to specify suitable immediate actions it is essential to know the current stock and delivery situation (both with the customer and the supplier).
Cause for action:	There must be a complaint and this must probably be justified (the blame can reasonably be laid with the supplier).
Procedure:	Any immediate actions are documented. Introduce actions which isolate the effects of the process as much as possible from the internal/external customer until a permanent solution is found. Check constantly the effectiveness of these temporary actions and initiate further actions if appropriate. If defective parts/ systems have already reached the "end-customer", appropriate service/maintenance actions must be introduced. In any event the 8D report should refer to any service actions which might be required ! The degree of effectiveness of the action(s) can be stated.
Result:	Immediate actions are defined and initiated
Variants:	-
Exceptions:	In individual cases (e.g., field failures) immediate actions may not be needed, by agreement with the customer.
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D

Input:	Data regarding the complaint. Stock/delivery situation (both with customer and supplier)
Output:	Jointly defined and effective immediate action
Comments:	-

2.4.4 Process step D4 : "Define root causes"

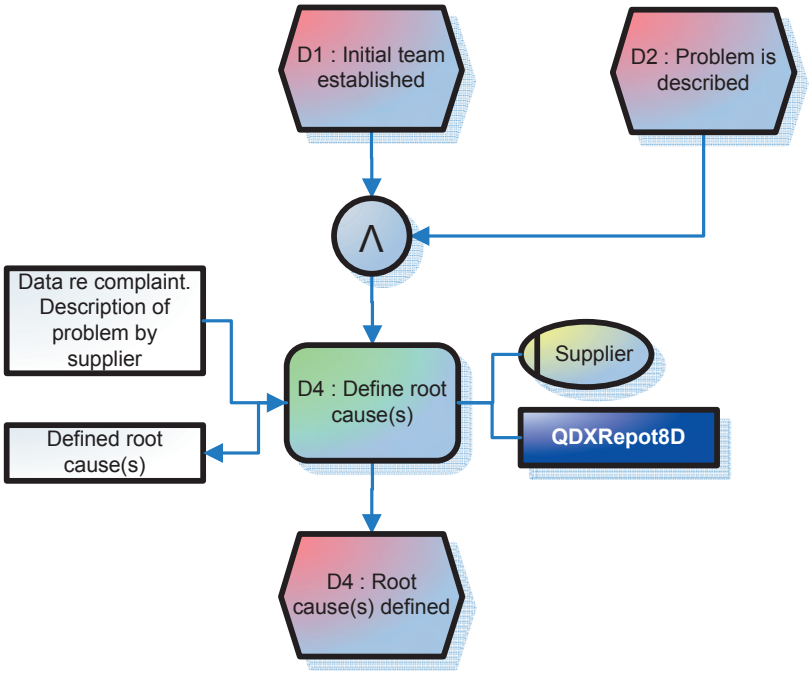

Fig. 2.4.4: Process step D4 : "Define root causes"

Title:	Process step D4 : "Define root causes"
ID:	108
Description:	Problems which occur are often too complex for a single root cause to be determined (to take an example, a plane may crash because the autopilot fails **and** the pilot is not adequately trained). Inter-actions must be considered explicitly here and step D4 is therefore not restricted to a **single** root cause. This means that step D4 and all the later, associated steps may need to be considered several times over.
Pre-conditions:	The supplier has the suspect parts available for analysis of the failure. As a minimum, however, detailed information (e.g., photos, installation conditions; the customer's wording) must be provided
Cause for action:	The team is appointed and the failures can be tracked by the supplier.
Procedure:	Search for all possible causes which might explain the occurrence of the problem. Determine the probable cause(s) and compare the description of the problem against the data available, to decide whether a probable cause is the root cause, or whether there are inter-actions. Prove the assumption by tests and experiments. The proportion of the causes in relation to the problem can be stated.
Result:	Root causes are determined and confirmed as relevant
Variants:	-
Exceptions:	It was not possible to determine causes
D:	Supplier
E:	-
M:	-

I:	Customer
QDX document:	QDXReport8D
Input:	Data regarding the complaint; description of the failure by the supplier.
Output:	Determined root cause(s).
Comments:	-

2.4.5 Process step : "Verify the complaint"

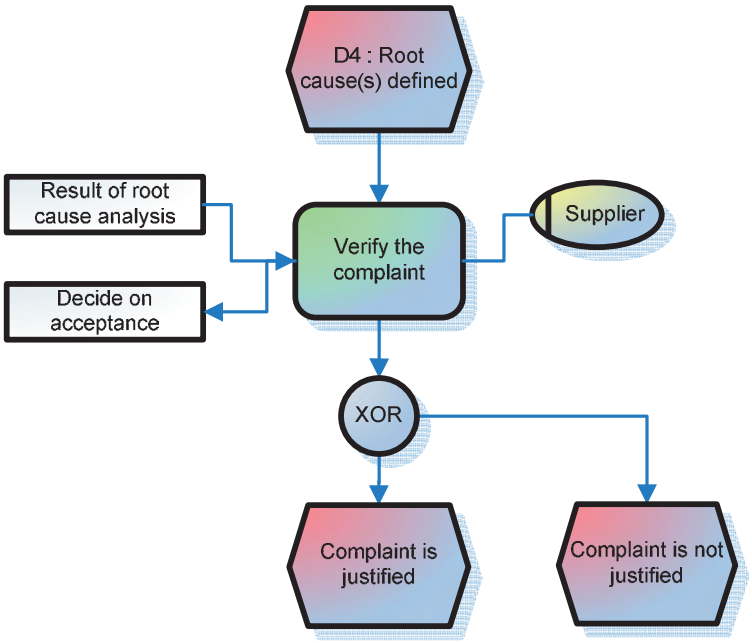

Fig. 2.4.5: Process step : "Verify the complaint"

Title:	Process step : "Verify the complaint"
ID:	109
Description:	After the root causes have been determined, it now also clear whether the problem was caused by the supplier. If it was not, the supplier again has the opportunity (the right) to refute the complaint from the customer. The concrete procedure is analogous to the process steps in the main process (see Section 2.3.3).
Pre-conditions:	The root cause analysis must be completed.
Cause for action:	The root cause analysis has been completed.
Procedure:	Verify whether the complaint is justified.
Result:	- **Either:** The complaint is justified. The cause lies with the supplier. - **Or:** The complaint is not justified because no fault was found (the part is in order according to the specification) or because no blame can be attached to the supplier
Variants:	It may be that this will be followed by a new complaint from the customer.
Exceptions:	-
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D
Input:	Result of the root cause analysis
Output:	Decision as to whether or not the complaint can be refuted.
Comments:	-

2.4.6 Process step D5 : "Determine possible corrective actions"

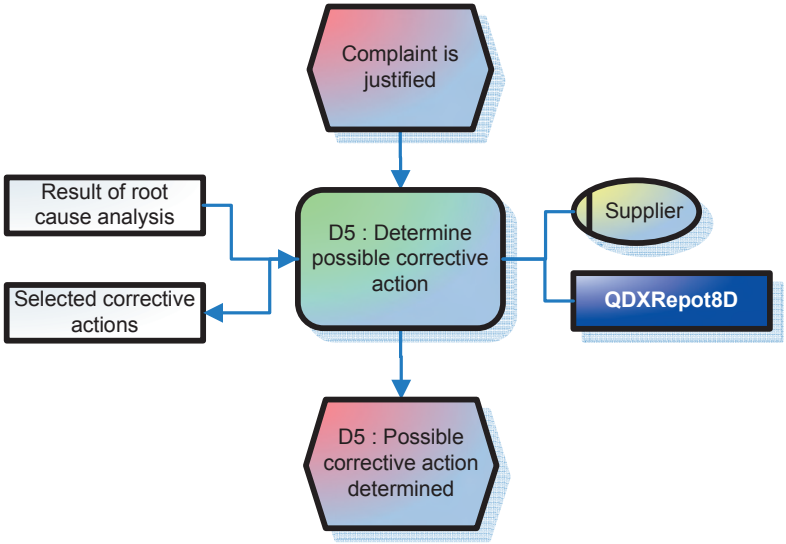

Fig. 2.4.6: Process step D5 : "Determine possible corrective actions"

Title:	Process step D5 : "Determine possible corrective actions"
ID:	110
Description:	Following on from the root cause analysis, the supplier must determine actions for the permanent elimination of the problem.
Pre-conditions:	The root cause analysis must be completed.
Cause for action:	The complaint is justified.
Procedure:	Choose the optimum permanent corrective action(s) and prove with appropriate tests that these actions really solve the problem from the customer's standpoint (and have no undesired side-effects).
Result:	Possible corrective actions have been determined and selected
Variants:	-
Exceptions:	In individual cases (e.g., field failures) corrective actions may not be needed, by agreement with the customer
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D
Input:	Result of the root cause analysis
Output:	Selected corrective actions
Comments:	-

2.4.7 Process step D6 : "Implement corrective actions"

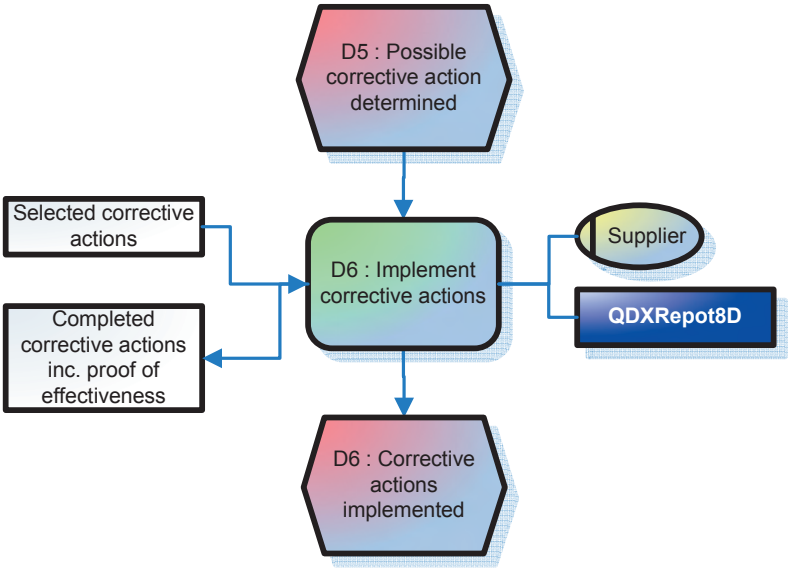

Fig. 2.4.7: Process step D6 : "Implement corrective actions"

Title:	Process step D6 : "Implement corrective actions"
ID:	111
Description:	Selected corrective actions (see D5) are now implemented and their effectiveness is checked. In exceptional cases the effectiveness checks can be carried out at a later stage (for example, if changes to tools are involved it may not be possible to carry out checks for 6 months).
Pre-conditions:	At least one action from D5 can prevent the problem
Cause for action:	Possible corrective actions have been defined.

Procedure:	Decide which continuing checks should be carried out to ensure that the cause of the problem has really been eliminated. Carry out the action plan, observe the effects and carry out the supporting measures as well, if necessary. Using appropriate information systems, verify the effectiveness of the corrective action for the end-user/customer.
Result:	At least one action has been carried out and its effectiveness has been demonstrated.
Variants::	-
Exceptions:	In individual cases (e.g., field failures) corrective actions may not be needed, by agreement with the customer
D:	Supplier
E:	Supplier and customer (optional)
M:	-
I:	Customer
QDX document:	QDXReport8D
Input:	Selected corrective actions
Output:	The corrective action which was implemented, including proof of effectiveness
Comments:	As an option, agreement can be reached between customer and supplier outside the QDX data transmission. QDX is used merely to document the result.

2.4.8 Process step D7 : "Determine permanent preventive actions"

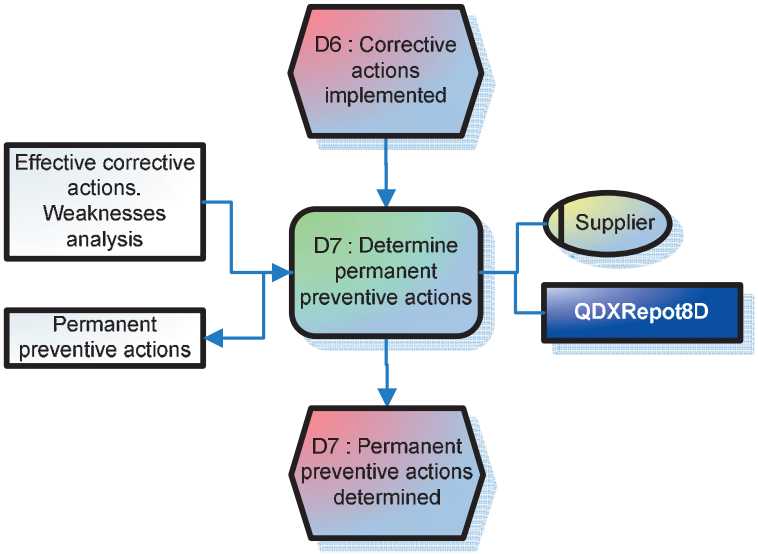

Fig. 2.4.8: Process step D7 : "Determine permanent preventive actions"

Title:	Process step D7 : "Determine permanent preventive actions"
ID:	112
Description:	In step D7 the 8D report form requires confirmation that the Product FMEA, Process FMEA, Production Control Plan and Work Instructions have all been revised. These documents are to be seen only as examples and their revision within the framework of the reject handling process does not need to be confirmed explicitly. In the QDX format a free text field is provided at this point, which must be read out as appropriate by the customer's system.

Pre-conditions:	Carry out an analysis of weaknesses (process and product).
Cause for action:	Preventive actions have been implemented and are effective.
Procedure:	Make changes to the management and control systems, work instructions and normal procedures to prevent the recurrence of the same or similar problems. It would be worthwhile to introduce a system which maintains a component process history, to ensure that similar defects are not repeated in new developments or design revisions.
Result:	Permanent preventive actions have been specified.
Variants:	-
Exceptions:	-
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D
Input:	Analysis of weaknesses; effective permanent preventive actions
Output:	Permanent preventive actions
Comments:	-

2.4.9 Process step D8 : "Close the 8D method"

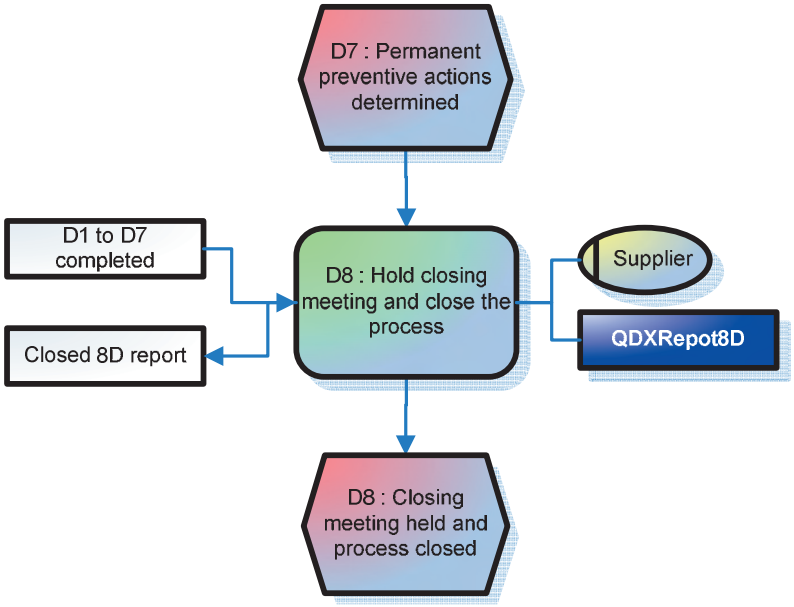

Fig. 2.4.9: Process step D8 : "Close the 8D method"

Title:	Process step D8 : "Close the 8D method
ID:	113
Description:	The 8D method should not be closed until the effectiveness of all the actions has been demonstrated. In this context, “effectiveness” means that the corrective actions have led to the position where the defect no longer occurs on this product. As far as defect prevention is concerned, a permanent preventive action is effective if the problem cannot appear in this or any related parts (e.g., a successor component) because of design changes or changes to the manufacturing process. With permanent preventive actions in particular, it is often impossible to provide proof of effectiveness before a relatively long period of time has elapsed – for example, the introduction into full production of the successor component. In such cases it is advisable to limit implementation of the permanent preventive actions to those which are needed to close the immediate problem. If the same problem appears in the same product or its successor, this should be treated as a repeat failure and a new complaint should be issued.
Pre-conditions:	All the steps leading to this present position have been completed successfully.
Cause for action:	1. Immediate actions have been discontinued. 2. Corrective actions have been implemented and are effective. 3. Permanent preventive actions have been specified.
Procedure:	Close the team’s operations.
Result:	A closing discussion is held and the problem-solving process is completed.
Variants:	-

Exceptions:	-
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D
Input:	All previous "D" steps have been carried out successfully and closed.
Output:	Closed 8D report
Comments	-

2.5 Verification/closure

The process steps described here have been maintained in general and refer both to the full 8D report and to the abbreviated 8D report or the brief findings (ShortConfirmation). Of course, some of the process steps might not be necessary, depending on the findings report required. However, the process has been modelled in such a way that not all process steps (for example, the verification of effectiveness) need to be carried out.

A detailed description and a diagram covering this part-process may be found in Section 2.2.

2.5.1 Process step : "Verify the findings report"

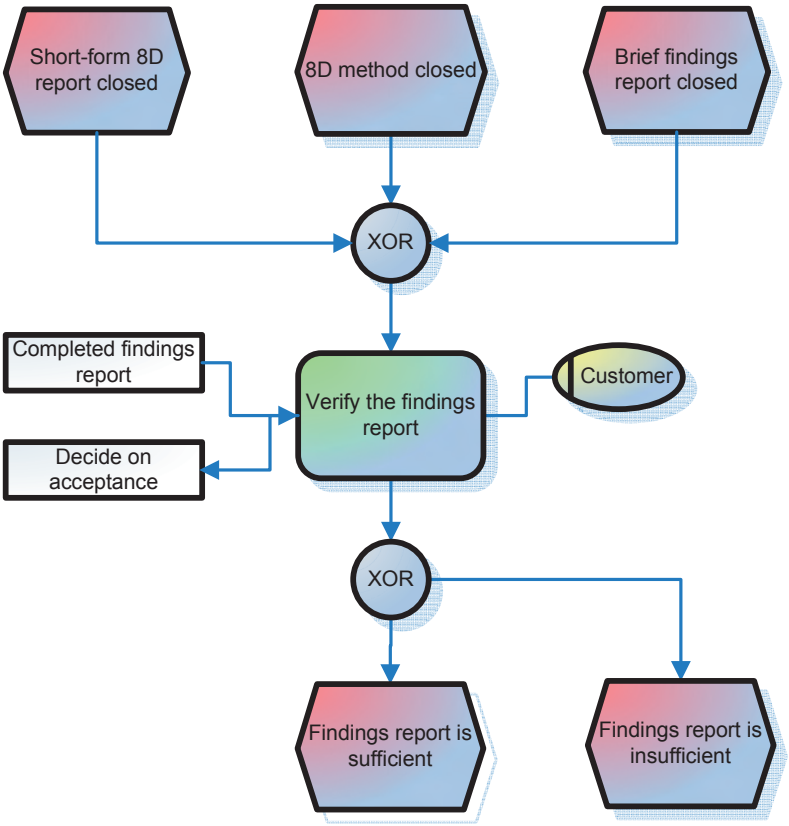

Fig. 2.5.1: Process step : "Verify the findings report"

Title:	Verification/closure The process steps described here have been maintained in general and refer both to the full 8D report and to the abbreviated 8D report or the brief findings (ShortConfirmation). Of course, some of the process steps might not be necessary, depending on the findings report required. However, the process has been modelled in such a way that not all process steps (for example, the verification of effectiveness) need to be carried out. A detailed description and a diagram covering this part-process may be found in Section 2.2. Process step : "Verify the findings report"
ID:	114
Description:	With some customers an overall feedback report on the findings submitted by the supplier is sufficient. From the customer's standpoint, feedback reports on the individual steps of an 8D report are often seen as not absolutely necessary. However, if the supplier believes these intermediate feedbacks to be useful, an individual agreement on the matter should be reached between the two parties. The supplier can send up-dated versions of his findings to the customer as often as he wishes. In such cases the customer is able at any time to reject the findings report, stating his reasons. In the subsequent version of his findings, the supplier must deal with the comments made by the customer.
Pre-conditions:	There must be a report of the supplier's findings.
Cause for action:	- **Either:** The 8D method is completed. - **Or:** The short-form 8D report is completed. - **Or:** The brief findings report is completed.

Procedure:	The customer checks the findings and evaluates their contents.
Result:	- **Either:** the customer accepts the findings as sufficient. - **Or:** The customer decides that the findings are not sufficient.
Variants:	The customer can also provide feedback to intermediate versions of the findings, if he wishes, for example, to reject any of the "D" steps carried out by the supplier.
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	-
QDX document:	-
Input:	A completed findings report.
Output:	A decision as to whether the findings report is sufficient or not.
Comments:	-

2.5.2 Process step : "Reject the findings report"

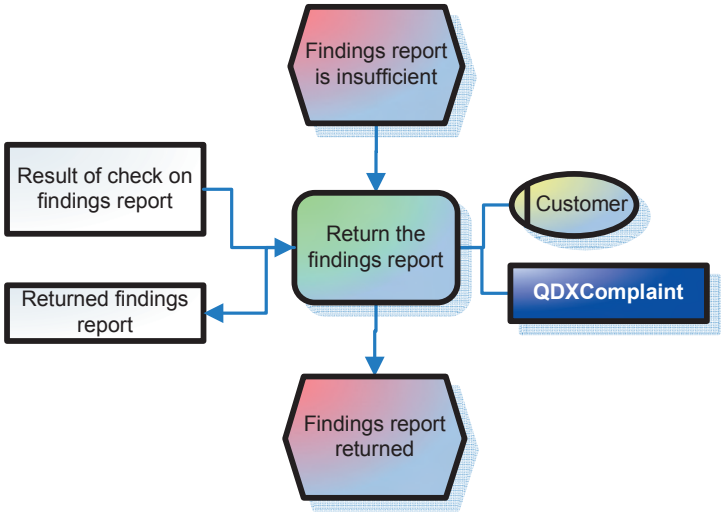

Fig. 2.5.2: Process step : "Reject the findings report"

Title:	Process step : "Reject the findings report"
ID:	115
Description:	If the customer believes the finding report not to be in order, he must advise the supplier that it is rejected.
Pre-conditions:	The findings report is checked
Cause for action:	The findings report is deemed to be inadequate
Procedure:	The customer rejects the findings report
Result:	The customer has advised the supplier that his findings report is rejected.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	Result of the check on the findings report
Output:	Rejected findings report
Comments:	-

2.5.3 Process step : "Verify the need for an effectiveness check"

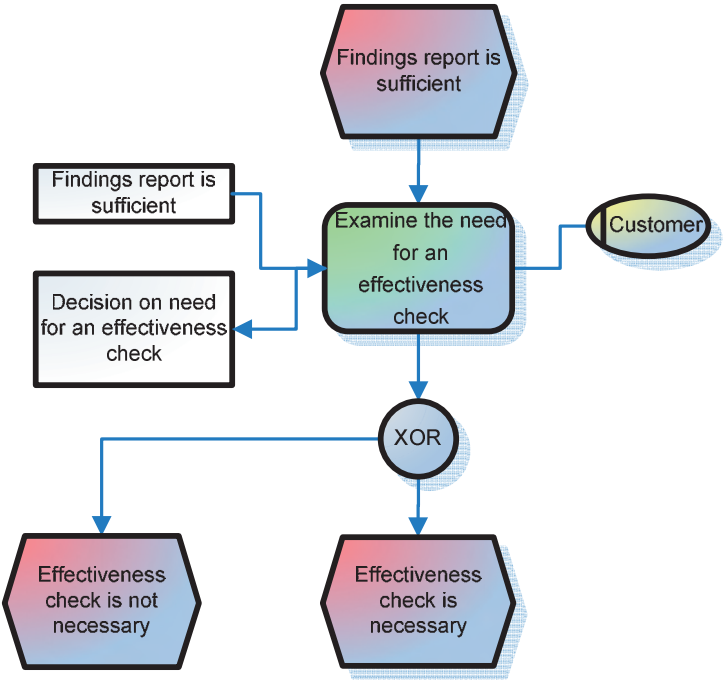

Fig. 2.5.3: Process step : "Verify the need for an effectiveness check"

Title:	Process step : "Verify the need for an effectiveness check"
ID:	116
Description:	The customer must decide whether or not a check is required of the effectiveness of the supplier's findings and corrective actions.
Pre-conditions:	-
Cause for action:	The findings report is adequate
Procedure:	Based on the findings report or on his company's requirements, the supplier decides whether or not an effectiveness check is necessary.
Result:	- **Either:** An effectiveness check is necessary - **Or:** An effectiveness check is not necessary
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	-
QDX document:	-
Input:	Decision that the findings report is adequate (in terms of contents).
Output:	Decision whether an effectiveness check is necessary.
Comments:	-

2.5.4 Process step : "Provisional acceptance of findings report"

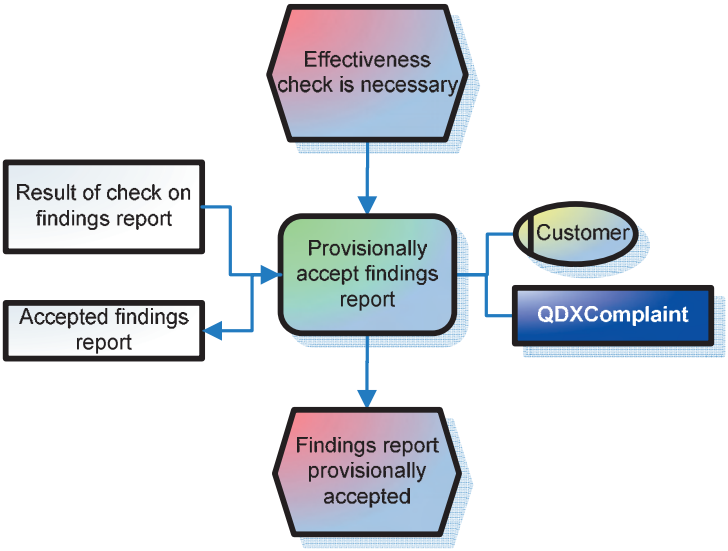

Fig. 2.5.4 Process step : "Provisional acceptance of findings report"

Title:	Process step : "Provisional acceptance of findings report"
ID:	117
Description:	The customer decides that the findings report is adequate. However, an effectiveness check must still be carried out. He therefore advises the supplier of the acceptance of the findings report, so that the supplier knows that at least the contents of his findings report are adequate.
Pre-conditions:	The findings report is adequate
Cause for action:	An effectiveness check must be carried out
Procedure:	The customer accepts the findings report
Result:	The customer has informed the supplier that the contents of his findings report are accepted.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	Result of the check of the findings report
Output:	The findings report is accepted.
Comments:	-

2.5.5 Process step : "Verify the effectiveness of the corrective actions"

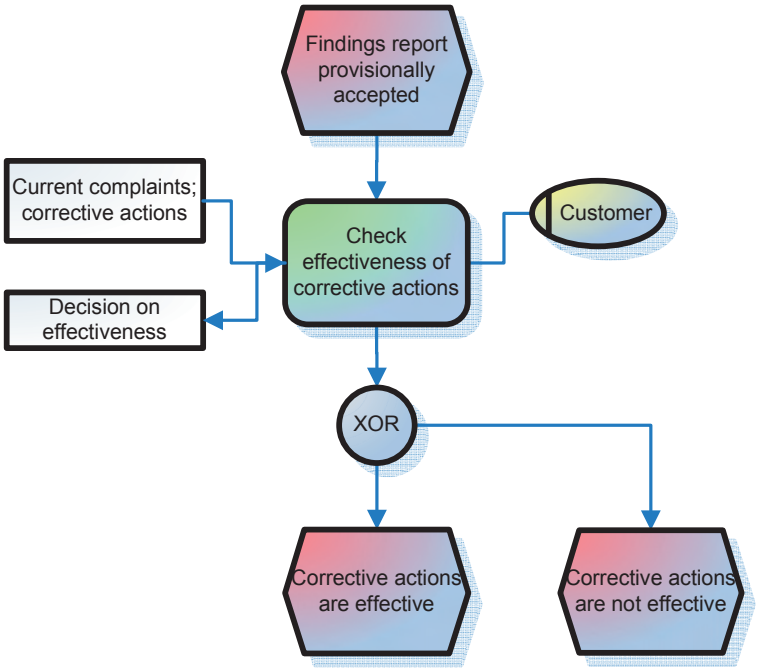

Fig. 2.5.5: Process step : "Verify the effectiveness of the corrective actions"

Title:	Process step : "Verify the effectiveness of the corrective actions"
ID:	118
Description:	The customer verifies the effectiveness of the corrective actions
Pre-conditions:	-
Cause for action:	The customer wishes to verify the effectiveness of the corrective action and has already confirmed acceptance of the findings report.
Procedure:	The customer carries out an effectiveness check. The ways and means of the effectiveness check must be specified on an individual case basis.
Result:	- **Either:** The corrective actions are effective. - **Or:** The corrective actions are not effective.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	-
QDX document:	-
Input:	Corrective actions; current complaint(s)
Output:	Decision as to whether or not the corrective actions are effective
Comments:	-

2.5.6 Process step : "Confirm the effectiveness of the corrective actions"

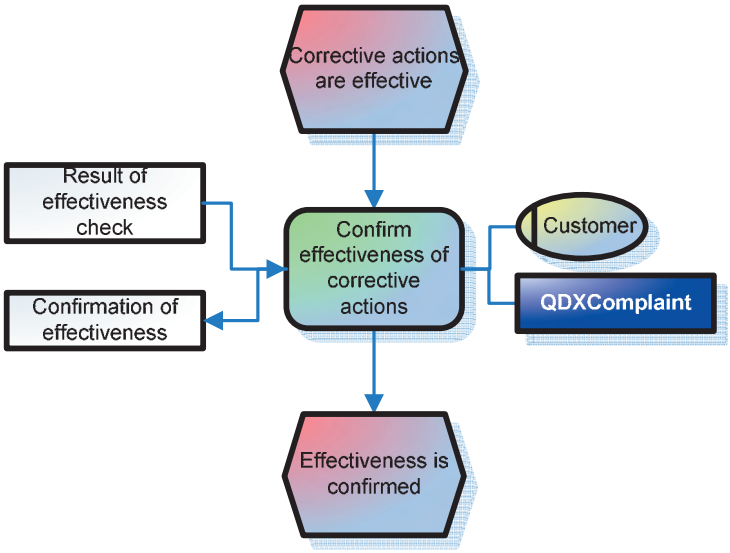

Fig. 2.5.6: Process step : "Confirm the effectiveness of the corrective actions"

Title:	Process step : "Confirm the effectiveness of the corrective actions"
ID:	119
Description:	If the corrective actions are effective, the customer must confirm this to the supplier.
Pre-conditions:	-
Cause for action:	The corrective actions are effective
Procedure:	The customer confirms that the corrective actions are effective
Result:	The effectiveness of the corrective actions is confirmed.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	Result of the effectiveness check
Output:	Confirmation of effectiveness
Comments:	-

2.5.7 Process step : "Refute the effectiveness of the corrective actions"

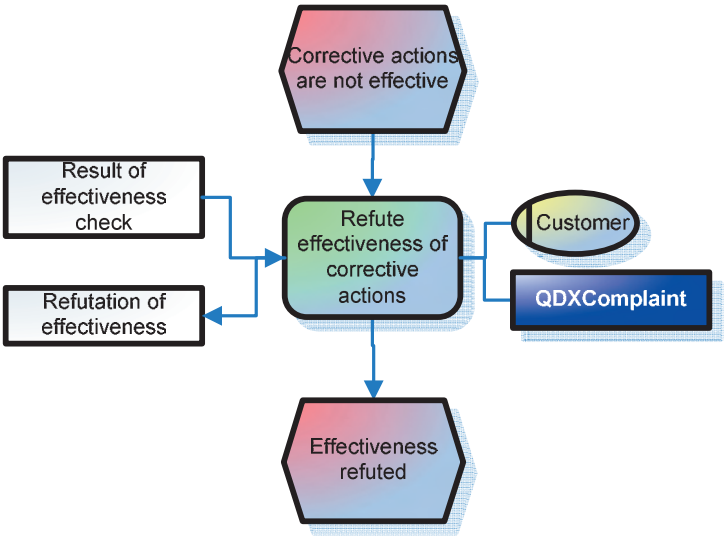

Fig. 2.5.7: Process step : "Refute the effectiveness of the corrective actions"

Title:	Process step : "Refute the effectiveness of the corrective actions"
ID:	120
Description:	If the corrective actions are not effective, the customer must advise the supplier of this.
Pre-conditions:	-
Cause for action:	The supplier's corrective actions are not effective
Procedure:	The customer refutes the effectiveness of the corrective actions
Result:	The effectiveness of the corrective actions is refuted.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	Result of the effectiveness check
Output:	The effectiveness is refuted.
Comments:	-

2.5.8 Process step : "Close the complaint"

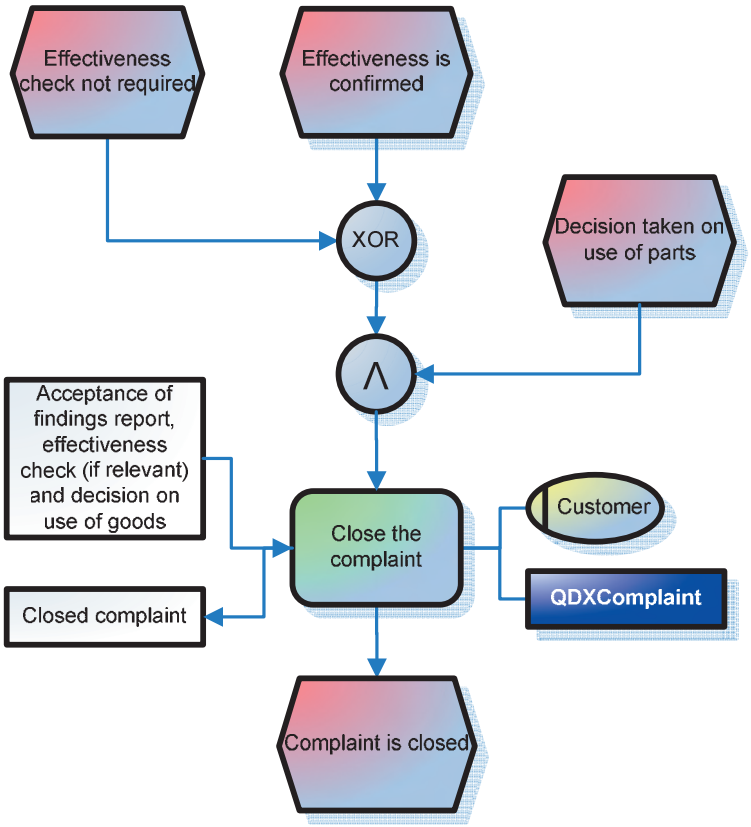

Fig. 2.5.8: Process step : "Close the complaint"

Title:	Process step : "Close the complaint"
ID:	121
Description:	If the customer has accepted the findings report and (if appropriate) confirmed effectiveness, the complaint is closed. Closure of a complaint by the supplier implies from the supplier's side that the effectiveness of the actions taken has been demonstrated, whether or not the customer has in fact carried out an effectiveness check. The supplier can therefore close the complaint on his side as well.
Pre-conditions:	All steps to be taken up to this point have been completed successfully.
Cause for action:	**a)** A decision on the use of the goods has been taken **b)** **and:** one of the following conditions must apply : - **Either:** An effectiveness check is not necessary; - **Or:** The effectiveness of the corrective actions has been confirmed.
Procedure:	The customer closes the complaint.
Result:	The complaint is closed.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	The findings report is accepted, as well as (if applicable) the result of the effectiveness check and decision on the use of the goods

Output:	The complaint is closed
Comments:	Once closed, a complaint cannot be re-opened. The closure brings about the so-called final status of "Complaint is closed" and "Complaint is cancelled" The complaint cannot be closed until all the findings (see Section 2.1.4) have been transmitted in full to the customer.

2.5.9 Process step : "Verify cancellation of the complaint"

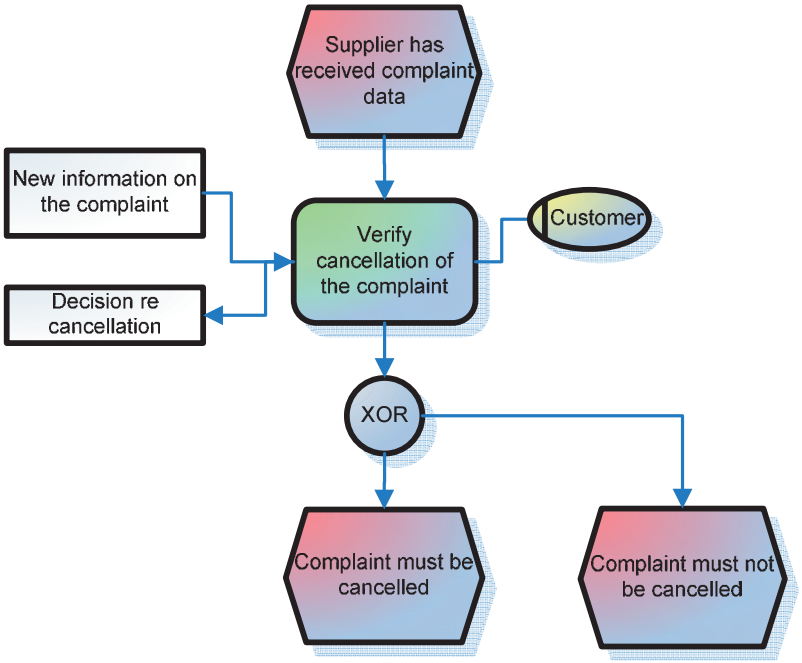

Fig. 2.5.9: Process step : "Verify cancellation of the complaint"

Title:	Process step : "Verify cancellation of the complaint""
ID:	122
Description:	A check to decide whether a complaint should be cancelled can be made at any time before the complaint is finally closed.
Pre-conditions:	The complaint is not yet closed or cancelled
Cause for action:	New information is received regarding the complaint
Procedure:	The customer checks whether the complaint must be cancelled
Result:	- **Either:** The complaint must be cancelled. - **Or:** The complaint must not be cancelled.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	-
QDX document:	-
Input:	New information regarding the complaint
Output:	Decision whether the complaint must be cancelled.
Comments:	As an alternative to closing the complaint, the customer can cancel it. Cancellation by the customer must be possible at each process step and at any time. The cancellation is then advised to the supplier by the customer.

2.5.10 Process step : "Cancel the complaint"

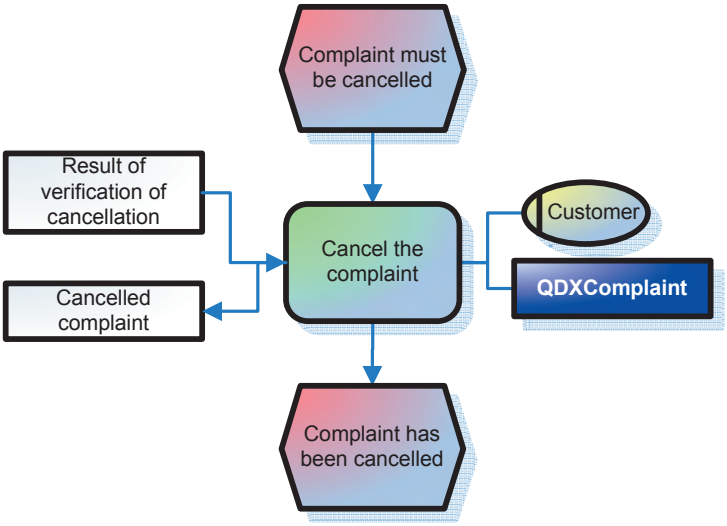

Fig. 2.5.10: Process step : "Cancel the complaint"

Title:	Process step : "Cancel the complaint"
ID:	123
Description:	If the customer cancels a complaint, he must give his reasons to the supplier.
Pre-conditions:	The complaint is not yet cancelled or closed
Cause for action:	The customer recognizes that the complaint is not justified.
Procedure:	The customer cancels the complaint and provides his reasons.
Result:	The complaint is cancelled. The supplier has received the cancellation.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	Result of the verification of the cancellation
Output:	The complaint is cancelled
Comments:	Thereafter, no changes may be made to the complaint or the findings therein, nor may they be transmitted to the other party. Any commercial, logistics or similar procedures which have been initiated must be rescinded. The complaint is not taken into account in the supplier assessment (ppm, etc.).

2.6 Rejecting a complaint

The rejection of a complaint has been defined as a sub-process, because this can take place at any point in the procedure. Furthermore, it is a variant of the overall process which should be described in more detail.

In this, the supplier initially rejects the complaint and advises the customer accordingly. The customer examines the supplier's rejection and decides whether to accept or refuse the rejection. The customer must advise the supplier of his decision.

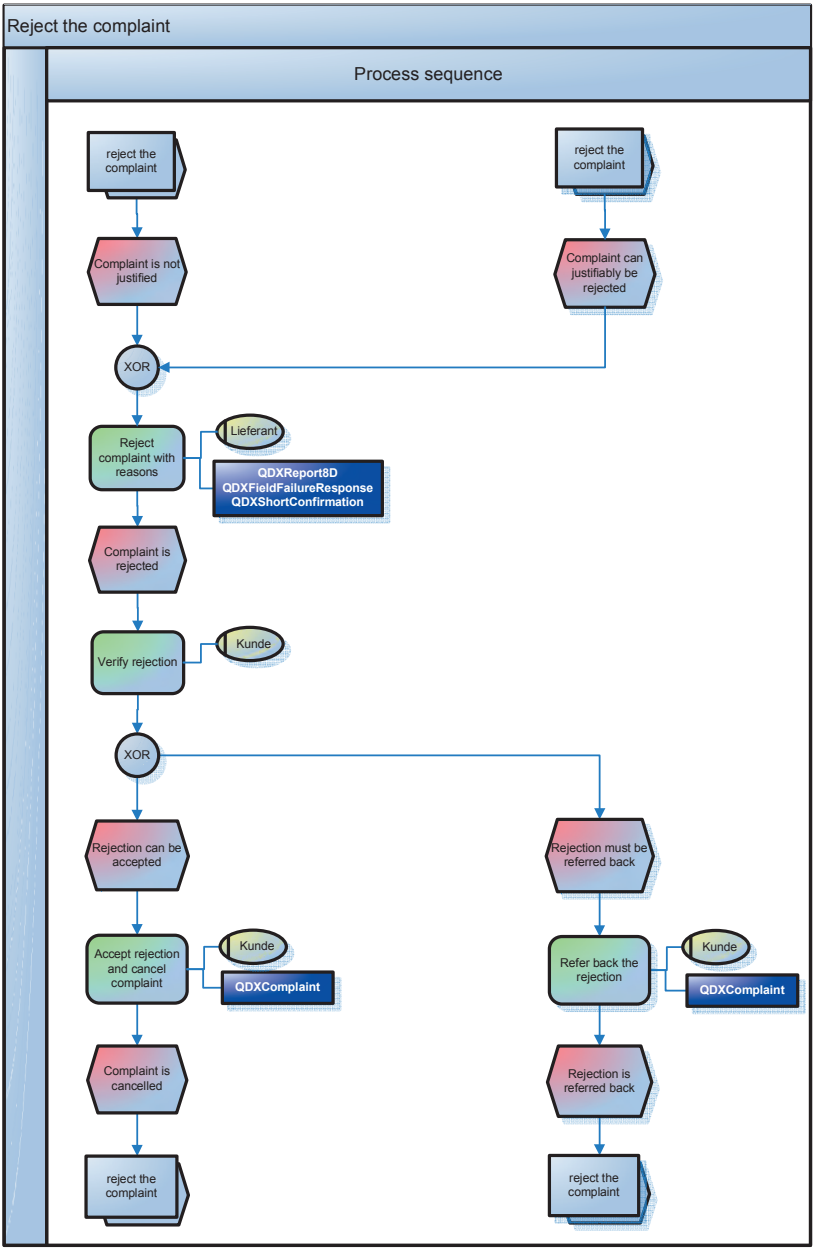

Fig. 2.6: Sub-process “Rejecting a complaint“

2.6.1 Process step : "Rejecting a complaint"

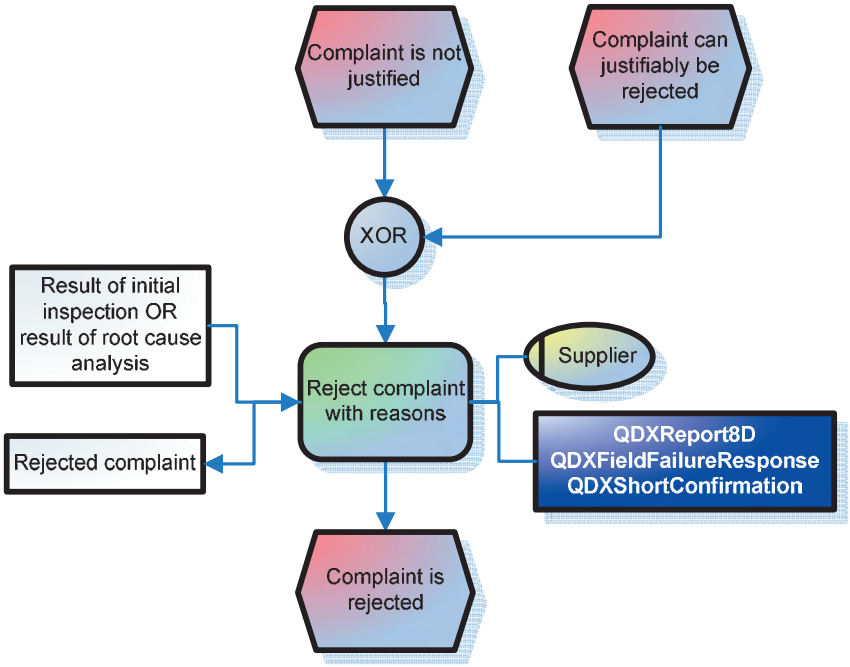

Fig. 2.6.1: Process step : "Rejecting a complaint"

Title:	Process step : "Rejecting a complaint"
ID:	124
Description:	The supplier can reject a complaint if he has grounds. The rejection must be advised to the customer (where appropriate, step D3 can be completed, using dummy data). However, this rejection becomes effective only if the customer accepts the rejection (this is done by cancelling the complaint) and only then can the supplier identify the procedure as "Closed" in the supplier system.

Pre-conditions:	-
Cause for action:	- **Either:** On the basis of the failure analysis the complaint is not justified; - **Or:** On the basis of the provisional examination the complaint can be rejected with good grounds.
Procedure:	The supplier rejects the complaint with good grounds.
Result:	The complaint is rejected.
Variants:	-
Exceptions:	-
D:	Supplier
E:	-
M:	-
I:	Customer
QDX document:	QDXReport8D, QDXFieldFailureResponse, QDXShortConfirmation
Input:	Result of the first examination or the result of the root cause analysis
Output:	Rejection with reasons: - **NotAccepted:** No blame can be levelled at the supplier. - **NoTroubleFound:** No fault has been found. The part is in order, according to the specification.
Comments:	The QDX document for the response depends on what form of findings report the customer has requested from the supplier.

2.6.2 Process step : "Accepting the supplier's rejection"

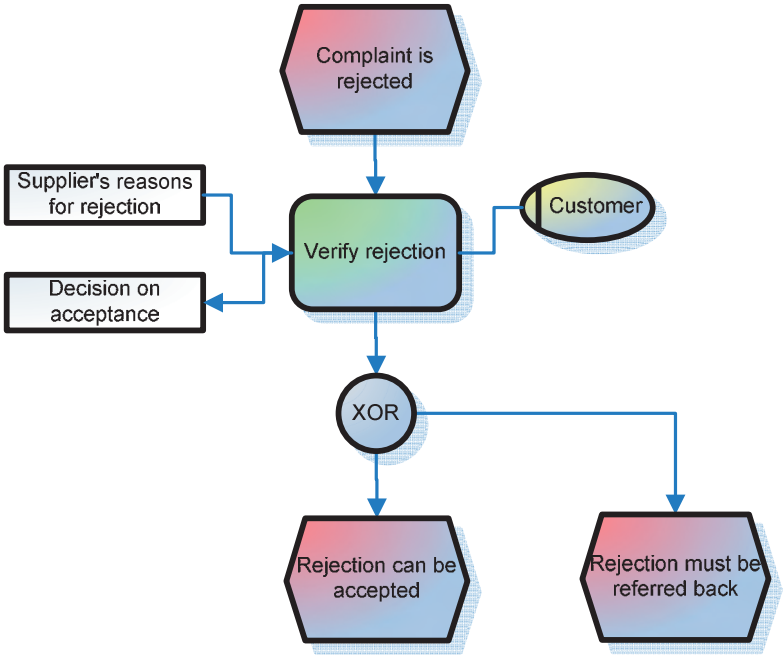

Fig. 2.6.2: Process step : "Rejecting a complaint"

Title:	Process step : "Rejecting a complaint"
ID:	125
Description:	The customer checks the supplier's rejection of the complaint. He decides whether the rejection should be accepted or refuted.
Pre-conditions:	-
Cause for action:	The supplier has rejected a complaint.
Procedure:	The customer examines the reasons given by the supplier for rejecting the complaint.
Result:	- **Either:** The customer agrees that the rejection is justified and can be accepted. - **Or:** In the customer's view the rejection is not justified and must be refuted.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	-
QDX document:	-
Input:	Supplier's reasons for rejecting the complaint: - No Trouble Found (NTF) - No blame lies with the supplier
Output:	Decide whether or not the rejection should be accepted.
Comments:	-

2.6.3 Process step : "Accept the rejection"

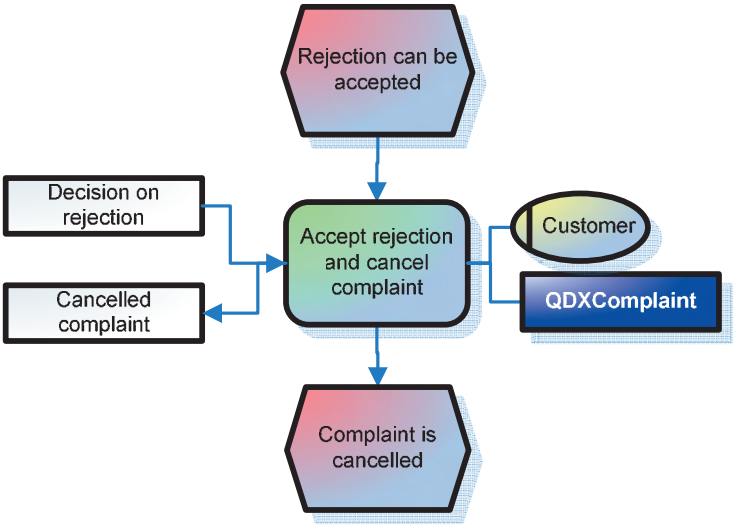

Fig. 2.6.3: Process step : "Accept the rejection"

Title:	Process step : "Accept the rejection"
ID:	126
Description:	If the customer accepts the supplier's rejection of the complaint, the customer cancels the complaint against the supplier. Ideally, where the complaint has been allocated to the wrong supplier, the customer will issue a new complaint against the correct supplier.

Pre-conditions:	-
Cause for action:	The supplier's rejection of a complaint has been checked by the customer and should be accepted.
Procedure:	The customer accepts the supplier's rejection and cancels the complaint.
Result:	The rejection has been accepted and the complaint has thereby been cancelled. The supplier has received agreement of the rejection. Thereafter, no changes may be made to the complaint or the findings therein, nor may they be transmitted to the other party. Any commercial, logistics or similar procedures which have been initiated must be rescinded. The complaint is not taken into account in the supplier assessment (ppm, etc.).
Variants:	-
Exceptions	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	Decision that the supplier's rejection can be accepted.
Output:	The complaint is cancelled.
Comments:	-

2.6.4 Process step : "Refusing a rejection"

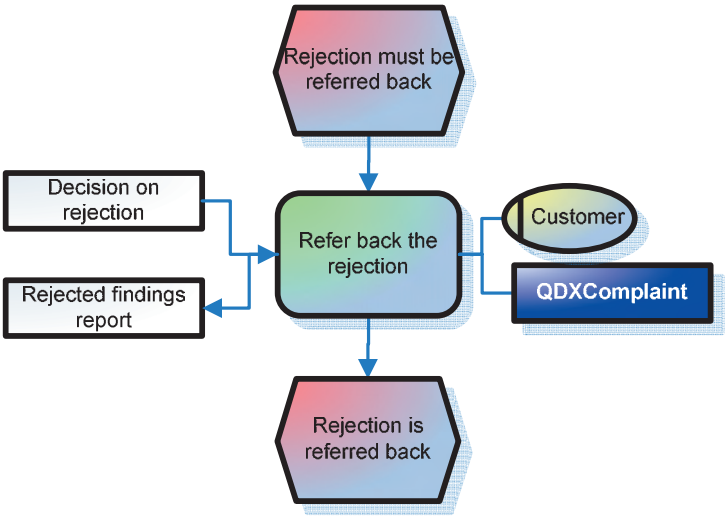

Fig. 2.6.4: Process step : "Refusing a rejection"

Title:	Process step : "Refusing a rejection"
ID:	127
Description:	If the customer does not agree with the supplier's rejection of the complaint, he must refuse to accept it.
Pre-conditions:	-
Cause for action:	The customer has examined the supplier's rejection of a complaint and this must be refused.
Procedure:	The customer does not accept the supplier's rejection and refuses it.
Result:	The supplier's rejection and, therefore, the complete findings report, is not accepted.
Variants:	-
Exceptions:	-
D:	Customer
E:	-
M:	-
I:	Supplier
QDX document:	QDXComplaint
Input:	Request that the supplier's rejection should be accepted.
Output:	The supplier's findings are rejected.
Comments:	-

3 QDX

3.1 QDX documents

The following QDX documents are used within the framework of the reject handling process :

QDXComplaint : This is used to transmit data regarding a complaint. It is used only by the customer, to send data to the supplier.

QDXReport8D : This is used to transmit the documented elimination of the problem using the 8D method. It is used only by the supplier, for transmission to the customer.

QDXShortConfirmation : This is used to transmit a brief findings report. It is used only by the supplier, for transmission to the customer.

QDXFieldFailureResponse : This is used to transmit a short-form 8D report (excluding steps D3, D5 and D7). It is used only by the supplier, for transmission to the customer.

The document status must always be shown as "Final“. No other document status is permitted.

3.2 QDX interfaces

The following table explains the situations in which QDX documents are transmitted and what (status) effects they have.

Action	Status	QDX document	K/L[15]	Consequence
Process step : "Supply details of complaint to supplier"	Complaint is open	QDXComplaint Overall process status = *Complaint open* 8D status = *not available*	K→L	Supplier also initiates the process in his system
Process step : " Decide on the use of the goods"	---	QDXComplaint Overall process status = * 8D status = *	K→L	For information only
Process step : "Cancel the complaint"	Complaint is cancelled	QDXComplaint Overall process status = *Complaint cancelled* 8D status = *not available*	K→L	Supplier also cancels the process in his system
Process step : "Reject the findings report"	8D report rejected	QDXComplaint Overall process status = *Complaint open* 8D status = *8D report rejected*	K→L	Supplier must revise his 8D report (based on the customer's objections)
Process step : "Provisional acceptance of findings report"	8D report accepted	QDXComplaint Overall process status = *Complaint open* 8D status = *8D report accepted*	K→L	Supplier can close his 8D report provisionally
Process step : "Confirm the effectiveness of the corrective actions"	8D report is effective	No status communication, since complaint is then closed	K→L	For information only

[15] K→L = Customer sends to supplier;
L→K = Supplier sends to customer

Action	Status	QDX document	K/L[15]	Consequence
Process step : "Refute the effectiveness of the corrective actions"	8D report is rejected	QDXComplaint Overall process status = *Complaint open* 8D status = *8D report rejected*	K→L	Supplier must revise his 8D report (at least include new corrective actions)
Process step : "Close the complaint"	Complaint is closed	QDXComplaint Overall process status = *Complaint is closed* 8D status = *8D report accepted*	K→L	Supplier can close the process in his system
Process step : "Rejecting a complaint"	Complaint is rejected	QDXReport8D Supplier process status = *8D closed*	L→K	Customer must check the supplier's response / rejection
Process step : "Accept the rejection"	Complaint is cancelled	QDXComplaint Overall process *Complaint is cancelled* 8D status = *not available*	K→L	Supplier can close the process in his system
Process step : "Refusing a rejection"	8D report is rejected	QDXComplaint Overall process status = *Complaint open* 8D status = *8D report rejected*	K→L	Supplier must revise his 8D report (min. D2).
8D-Method (Overall subprocess except Process step D8 : "Close the 8D method")	8D report is open	QDXReport8D Supplier process status = *8D open*	L→K	Customer can give feedback (if only negative) to the intermediate version. Otherwise for information only
Process step D8 : "Close the 8D method	8D report is closed (supplier)	QDXReport8D Supplier process status = *8D closed*	L→K	Supplier has completed the elimination of the problem. Customer must now check the response (8D report)

3.3 QDX requirements

It must be borne in mind that several different, independent 8D reports may be submitted for a single complaint. There is therefore a 1:n relationship[16] between complaint (QDXComplaint) and 8D report (QDXReport8D)

A complaint or an 8D report can be completely up-dated and transmitted at any time, up to the closure of the reject handling process (the only exception is the commercial acceptance in the 8D report).

[16] The same applies to QDX documents QDXShortConfirmation and QDXFieldFailure Response.

4 Appendix: Glossary

0 km : The vehicle has not yet been delivered to the customer/dealer and has therefore not yet left the boundaries of the manufacturing plant.

8D report : A form, established and defined by the VDA-QMC, which provides a structured means of documenting clearly the defect elimination process, which is broken down into eight individual steps.

Acceptance (commercial) : Acceptance of the financial demands made by the customer in relation to the complaint. In this context, commercial acceptance is merely the provisional acceptance of suggested figures. The actual commercial process operates outside this process.

Acceptance (technical) : Acceptance by the supplier, once the appropriate checks have been made, that the part which has been rejected is defective, or does not meet the agreed requirements, and that he (the supplier) is responsible for (the cause of) the deviation. Technical acceptance does not imply recognition of any of the customer's financial demands - see "Acceptance (commercial)".

Accumulated rejects : Complaints where a detailed analysis and elimination of the defect would be excessive in relation to the value to be gained or the risk involved. Often the cause of the problem can arise from technical manufacturing or physical causes which cannot be eliminated (for example, shrink holes in castings).

Actions : Targeted activities intended to change a current, undesirable situation into one which in future represents the desired and agreed situation.

Analysis of cause(s) : A core task in the reject handling process/reject management and part of failure elimination (q.v.).

Business partners : The customer and the supplier.

CAQ-System : A generic term for IT systems which are installed specially as support for the quality management process (**C**omputer **A**ided **Q**uality Assurance).

Cause (or cause of failure) : One cause (perhaps among others) responsible for the failure.

Communication : Between the business partners this occurs classically by personal discussion but nowadays increasingly in the form of the exchange of data and information using electronic media (telephone, telefax, E-mail) or direct transmission of data from one CAQ system to another.

Complaint : A synonym for the term "reject". A deviation (see "Deviation") has occurred at the customer's premises and the cause of this is levelled at the supplier. In some cases, the document used to inform the supplier that defective goods have been found (for example, an inspection report) is also referred to as a "complaint".

Complaint data : Information associated with the complaint and which occur in the course of the reject handling process.

Corrective action(s) : Action(s) to contain the problem, in order to minimize the effects of a defect which has already occurred. The focus is on correcting the concrete cause of the failure of the goods or services in question. Corrective actions are taken to eliminate the cause of a failure which has been detected or another, undesirable situation which has been recognized.

Customer : The person or organisation which orders the goods or services and pays for the delivery of the material products or the providing of the agreed services in some way – usually by the payment of a sum of money.

Defect : See "Failure".

Deviation : The "difference between the value of a characteristic and a reference value". In the case of quantitative characteristics the deviation is defined as "value of the characteristic minus the reference value". If the deviation exceeds the permitted/specified/agreed limits (see "Tolerance") this represents a failure (q.v.). With qualitative characteristics the same applies in principle – that is, a deviation from specified requirements represents a defect or failure.

EDI : The abbreviation of **E**lectronic **D**ata **I**nterchange. These days this is often referred to as IT (= Information Technology).

Effectiveness : In this connection, this means that the actions taken have resulted in the complaint in question not occurring again in the part in question. In the case of (permanent) preventive actions the range of observation extends further : the failure must not occur in follow-on parts or parts of the same design family.

Failure : Synonymous with and often used instead of "problem“ or "defect". If the deviation (q.v.) exceeds the permitted/specified/agreed limits for quantitative characteristics, this represents a failure. In the case of qualitative characteristics, if the parts do not meet requirements in terms of specified limits or characteristics which may tacitly be expected, this is also a failure.

Failure appearance : Within the terms of a description of a failure by the supplier, this is the initial description : or example, CD player mechanism broken as a result of excessive stress". It is part of the "failure description from the supplier's standpoint".

Failure description from the customer's standpoint : A symptomatic description of the deviation. The customer will typically describe the obvious symptom of the failure : "the CD is not ejected".

Failure description from the supplier's standpoint: An analytical, qualified description of the appearance of the failure or failure mode. The supplier generally describes the defect in the product : "broken gear in the loading mechanism to the CD player".

Failure elimination; failure correction process; failure elimination : These are synonymous expressions, used as a collective term for all actions which ensure that, once a failure has been detected, only defect-free parts reach the production area. Root cause analysis is also covered by these expressions.

Failure mode : Within the terms of a description of a failure by the supplier, this is the description of the type of failure, or the more precise circumstances which have led to the failure – for example, : "The CD player mechanism is sluggish at temperatures below -10°C and this causes a mechanical overload on the loading mechanism“. It part of the "failure description from the supplier's standpoint".

Failure prevention : This describes all actions which prevent the (repeat) occurrence of the same failure. It is a synonym for (permanent) preventive actions. These include improvements to the production process or fundamental changes to the design of the part.

Field failure : A failure (q.v.) which has occurred in the field. "Field" means that the vehicle in which the failure occurred is already with the end-user/dealer and has therefore left the manufacturing plant.

Goods : In the case of material products, this is a collective term for parts, components, goods supplied, delivery, etc.

Immediate actions : These actions are taken immediately after a failure occurs, to secure current production and to supply defect-free products. Such an action might be a 100% inspection before the parts are assembled into the end-product. Immediate actions are always unplanned and involve a relatively large amount of work. They are therefore generally used only for a limited period of time or a limited quantity of products (usually until long-term corrective actions are introduced). The expiry of agreed immediate actions must be agreed between the customer and supplier.

Interface : in EDI the point of transfer of data/information from one system to another (CAQ systems in this context).

Interim actions : Actions for a specified/limited period of time in order to contain and restrict immediately the failure which has been detected, with its effects on production and the end-product, using all means possible – e.g., "Stop the machine".

NTF / NFF : **"**NTF" = **N**o **T**rouble **F**ound. The alternative expression "NFF" (= **N**o **F**ault **F**ound) is also widely used.

Problem : See "Failure".

QDX : An abbreviation for **Q**uality **D**ata e**X**change. This is a standardised interface description in XML format, used to exchange quality data directly between the customer's supplier's CAQ systems. QDX was developed and defined from 2002 to 2004 by Working Group 7 as a contract for the VDA-QMC and has been developed constantly ever since.

Quality-relevant data : Data (in the sense of information) arising and detected within the framework of quality management in the company.

Preventive actions : The purpose of (permanent) preventive actions is primarily to eliminate the risk. The focus lies on preventing a recurrence of the same failure in the same product or in products of the same design family. Preventive actions are taken as a priority to eliminate the cause of a possible failure or some other possible undesired situation.

Requirement : The demand that a unit meets the specified performance.

Repeat failure (0 km) : This is always defined by the customer and is covered by the following conditions:

1. The complaint has already been made once against the part (basis: the customer's part number).
2. The complaint was sent to the same supplier (basis: the contractual partnership between customer and supplier).
3. Both complaints have the same failure symptom (basis: the customer's description of the failure).
4. The first complaint regarding this combination has already been closed.

If all four conditions apply, this is a repeat failure.

Repeat failure (field) : This is always defined by the customer and is covered by the following conditions :

1. The complaint has already been made once against the part (basis: the customer's part number).
2. The complaint was sent to the same supplier (basis: the contractual partnership between customer and supplier).
3. Both complaints have the same failure symptom (basis: the customer's description of the failure).
4. The first complaint regarding this combination has already been closed.

5. The date of manufacture of the part (not the registration date of the vehicle) in which the failure occurred is after the date of introduction of the action described in D6.

If all five conditions apply, this is a repeat failure.

Root cause(s) : The causes which, after the question is repeatedly asked : "Why did the failure/this undesired situation occur ?“ do not break down into further sub-structures. In other words, the "root" of the problem.

Services : The counter-part of goods supplied. As opposed to material products, the term "services" covers all activities carried out by the supplier under contract to the customer (such as cleaning, consultancy or training).

Short-form findings report : The customer can ask the supplier to provide a brief report of his findings regarding the complaint as a "short-form findings report". This covers "only" the technical and commercial acceptance and may also include the introduction of corrective actions. A short-form findings report is generally used for accumulated rejects.

Short-form 8D report : An 8D report without steps D5 and D7. In addition, all the actions are merely optional. The short-form 8D report is used only for field failures (q.v.).

Supplier : The supplier is the person or organisation which produces the goods or services which have been ordered and expects/receives a previously agreed payment from the customer for their delivery – usually by the payment of a sum of money.

Tolerance : The maximum permitted figure minus the minimum permitted figure; alternatively the upper deviation limit minus the lower deviation limit. The tolerance for a given characteristic is defined as the difference between two specified figures and is thus a specified value for a quantitative characteristic.

XML : The abbreviation for e**X**tensible **M**arkup **L**anguage. This is used to display hierarchically structured data in the form of text data. XML is used in particular for exchanging data between computer systems, especially over the internet.

5 Appendix: Examples of szenarios

In this section the process is described with the aid of a number of examples of scenarios. In these, the focus is on the QDX documents used, how they are completed and how they should be interpreted by the recipient. Important XML elements which affect the control of the process itself are highlighted.

Data regarding the examples :

- The OEM is given the name of "Auto AG" in each example DUNS-No.: 100000000

- The supplier is given the name of "Musterlieferant GmbH" in each example. DUNS-No.: 200000000

The first four examples are based on the assumption that an 8D report has been requested as the type of response required. In the last example, a "ShortConfirmation“ has been requested as the type of response required.

5.1 Rejecting a complaint

Step 1: Auto AG uses an exterior mirror (ABC100-010-R-R) supplied by Musterlieferant GmbH. It is noticed in production that the electronic control to some exterior mirrors is defective. The problem occurs with all colour variants and so a number of different part-numbers (ABC100-010-R-G, ABC100-010-L-R, ABC100-010-L-G) are involved and 10 defective items of each colour and side must therefore be rejected with the same failure. Because it is the same failure appearance and the parts are all the same in their design, these items are assembled and summarised in a single complaint and rejected by Auto AG as a single failure (see Section 5.1.1).

Step 2: Musterlieferant GmbH starts its failure elimination process, using the 8D method. On receiving details of the complaint it is immediately recognized that the company does not supply the parts in question. Because of this, Musterlieferant GmbH rejects the complaint (see Section 5.1.2).

Step 3: Auto AG accepts the rejection and cancels the complaint against Musterlieferant GmbH (see Section 5.1.3). A new complaint is then issued to the correct supplier (as a new process).

5.1.1 Step 1 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-03-31T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-101</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-03-31T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000001</ID>
        <Description>The electronic exterior mirror control does not operate. This problem occurs in all variants and is not restricted to one side or the
other.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <BuyerProductItemIdentification>
            <ID>ABC100-010-R-R</ID>
            <Name>Right-hand exterior mirror, red</Name>
        </BuyerProductItemIdentification>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <ConcernedProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC100-010-R-G</ID>
                <Name>Right-hand exterior mirror, green</Name>
            </BuyerProductItemIdentification>
            <ComplainedQuantity>
                <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
            </ComplainedQuantity>
        </ConcernedProductItem>
        <ConcernedProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC100-010-L-R</ID>
                <Name>Left-hand exterior mirror, red</Name>
            </BuyerProductItemIdentification>
            <ComplainedQuantity>
                <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
            </ComplainedQuantity>
        </ConcernedProductItem>
        <ConcernedProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC100-010-L-G</ID>
                <Name>Left-hand exterior mirror, green</Name>
            </BuyerProductItemIdentification>
            <ComplainedQuantity>
                <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
            </ComplainedQuantity>
        </ConcernedProductItem>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <ComplaintStatus>open</ComplaintStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.1.2 Step 2 : QDXReport8D

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXReport8D xsi:schemaLocation="urn:jai:qdxQDXReport8D:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXReport8D:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-01T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>8D-00100001</DocumentID>
            <IssueDateTime>2009-04-01T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-01T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
            <Organization>
                <Contact>
                    <ID>01</ID>
                    <Name>Hans Mustermann</Name>
                </Contact>
                <Contact>
                    <ID>02</ID>
                    <Name>Rainer Zufall</Name>
                </Contact>
                <Contact>
                    <ID>03</ID>
                    <Name>Klara Fall</Name>
                </Contact>
            </Organization>
        </SellerParty>
    </Header>
    <StepD1>
        <CoreTeam>
            <KeyContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>01</ContactID>
            </KeyContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>02</ContactID>
            </TeamMemberContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>03</ContactID>
            </TeamMemberContactReference>
        </CoreTeam>
    </StepD1>
    <StepD2>
        <ComplaintDocumentID>RM-101</ComplaintDocumentID>
        <ComplaintItemID>BA-10000001</ComplaintItemID>
        <ComplaintItemStatusCode>NotAccepted</ComplaintItemStatusCode>
        <Quantity unitCode="ST">10.0</Quantity>
        <ComplaintItemDescription>The reject parts are not made by us. Wrong supplier.</ComplaintItemDescription>
        <AcceptedDefectiveQuantity unitCode="ST">0.0</AcceptedDefectiveQuantity>
        <ComplaintAcceptanceIndicator>false</ComplaintAcceptanceIndicator>
        <BuyerProductItemIdentification>
            <ID>ABC100-010-R-R</ID>
            <Name>Right-hand exterior mirror, green</Name>
        </BuyerProductItemIdentification>
        <ConcernedProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC100-010-R-G</ID>
                <Name>Right-hand exterior mirror, green</Name>
            </BuyerProductItemIdentification>
            <ComplaintItemStatusCode>NotAccepted</ComplaintItemStatusCode>
            <Quantity unitCode="ST">10.0</Quantity>
            <AcceptedDefectiveQuantity unitCode="ST">0.0</AcceptedDefectiveQuantity>
            <ComplaintAcceptanceIndicator>false</ComplaintAcceptanceIndicator>
        </ConcernedProductItem>
```

```
            <ConcernedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC100-010-L-R</ID>
                    <Name>Left-hand exterior mirror, red</Name>
                </BuyerProductItemIdentification>
                <ComplaintItemStatusCode>NotAccepted</ComplaintItemStatusCode>
                <Quantity unitCode="ST">10.0</Quantity>
                <AcceptedDefectiveQuantity unitCode="ST">0.0</AcceptedDefectiveQuantity>
                <ComplaintAcceptanceIndicator>false</ComplaintAcceptanceIndicator>
            </ConcernedProductItem>
            <ConcernedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC100-010-L-G</ID>
                    <Name>Left-hand exterior mirror, green</Name>
                </BuyerProductItemIdentification>
                <ComplaintItemStatusCode>NotAccepted</ComplaintItemStatusCode>
                <Quantity unitCode="ST">10.0</Quantity>
                <AcceptedDefectiveQuantity unitCode="ST">0.0</AcceptedDefectiveQuantity>
                <ComplaintAcceptanceIndicator>false</ComplaintAcceptanceIndicator>
            </ConcernedProductItem>
            <SupplierProcessStatus>closed</SupplierProcessStatus>
        </StepD2>
</ns1:QDXReport8D>
```

5.1.3 Step 3 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-02T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-101</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-02T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000001</ID>
        <Description>The electronic exterior mirror control does not operate. This problem occurs in all variants and is not restricted to one side or the
other.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <BuyerProductItemIdentification>
            <ID>ABC100-010-R-R</ID>
            <Name>Right-hand exterior mirror, red</Name>
        </BuyerProductItemIdentification>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <ConcernedProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC100-010-R-G</ID>
                <Name>Right-hand exterior mirror, green</Name>
            </BuyerProductItemIdentification>
            <ComplainedQuantity>
                <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
            </ComplainedQuantity>
        </ConcernedProductItem>
        <ConcernedProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC100-010-L-R</ID>
                <Name>Left-hand exterior mirror, red</Name>
            </BuyerProductItemIdentification>
            <ComplainedQuantity>
                <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
            </ComplainedQuantity>
        </ConcernedProductItem>
        <ConcernedProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC100-010-L-G</ID>
                <Name>Left-hand exterior mirror, green</Name>
            </BuyerProductItemIdentification>
            <ComplainedQuantity>
                <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
            </ComplainedQuantity>
        </ConcernedProductItem>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <ComplaintStatus>cancelled</ComplaintStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.2 Rejecting the first findings report

Step 1: Auto AG uses a seat supplied by Musterlieferant GmbH. This is a JIT/JIS part without its own part number. In production it is found that the seat is defective (the seat adjustment mechanism is defective; 10 seats in total). A complaint covering the 10 seats is therefore sent to Musterlieferant GmbH. Because there is no part number for the JIT/JIS assembly, all the part numbers contained in the assembly must be quoted. In this example, to keep things simple, this is illustrated with three items : the seat chassis (ABC200-010), the seat back (ABC200-020) and the cover (ABC200-030) with one part in each case (see Section 5.2.1).

Step 2: Musterlieferant GmbH starts its failure elimination process, using the 8D method. On completing the eight D steps, Musterlieferant GmbH closes the failure elimination process and sends the 8D report to Auto AG (see Section 5.2.2).

Step 3: Auto AG checks the 8D report but is not satisfied with the corrective action which has been introduced. Auto GmbH therefore rejects the 8D report (see Section 5.2.3).

Step 4: Musterlieferant GmbH makes changes to the corrective action in order to achieve greater effectiveness and sends a new 8D report to Auto AG (see Section 5.2.4).

Step 5: The up-dated 8D report now meets Auto AG's expectations. Because no check on effectiveness is required to be carried out, the complaint can be closed directly (see Section 5.2.5).

5.2.1 Step 1 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-03-31T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-102</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-03-31T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000002</ID>
        <Description>The seat adjustment is defective. The seat back cannot be adjusted.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <AssemblyProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-010</ID>
                    <Name>Seat pan</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-020</ID>
                    <Name>Backrest</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-030</ID>
                    <Name>Coating</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
        </AssemblyProductItem>
        <ComplaintStatus>open</ComplaintStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.2.2 Step 2 : QDXReport8D

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXReport8D xsi:schemaLocation="urn:jai:qdxQDXReport8D:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXReport8D:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-13T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>8D-00100002</DocumentID>
            <IssueDateTime>2009-04-13T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-13T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
            <Organization>
                <Contact>
                    <ID>01</ID>
                    <Name>Hans Mustermann</Name>
                </Contact>
                <Contact>
                    <ID>02</ID>
                    <Name>Rainer Zufall</Name>
                </Contact>
                <Contact>
                    <ID>03</ID>
                    <Name>Klara Fall</Name>
                </Contact>
            </Organization>
        </SellerParty>
    </Header>
    <StepD1>
        <CoreTeam>
            <KeyContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>01</ContactID>
            </KeyContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>02</ContactID>
            </TeamMemberContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>03</ContactID>
            </TeamMemberContactReference>
        </CoreTeam>
    </StepD1>
    <StepD2>
        <ComplaintDocumentID>RM-102</ComplaintDocumentID>
        <ComplaintItemID>BA-10000002</ComplaintItemID>
        <ComplaintItemStatusCode>Accepted</ComplaintItemStatusCode>
        <Quantity unitCode="ST">10.0</Quantity>
        <ComplaintItemDescription>The seat back cannot be adjusted. A broken component in the seat retainer blocks
movement.</ComplaintItemDescription>
        <AcceptedDefectiveQuantity unitCode="ST">10.0</AcceptedDefectiveQuantity>
        <ComplaintAcceptanceIndicator>true</ComplaintAcceptanceIndicator>
        <SupplierProcessStatus>closed</SupplierProcessStatus>
    </StepD2>
    <StepD3>
        <ContainmentAction>
            <ID>01</ID>
            <Description>We are immediately introducing 100% inspection in the shipping department. In this way we will ensure that no more
defective parts are shipped to you.</Description>
            <StartDateTime>2009-04-01T12:00:00.0Z</StartDateTime>
            <DueDateTime>2009-04-30T12:00:00.0Z</DueDateTime>
            <EffectivenessDegreeNumeric>100.0</EffectivenessDegreeNumeric>
        </ContainmentAction>
        <StepD4>
            <RootCauseAnalysis>
                <RootCause>
                    <ID>01</ID>
                    <Description>The root cause analysis reveals that a single batch from a sub-supplier is affected. The sub-supplier used sub-
standard material for the seat retainer, so this was already broken when assembly was carried out. Because of this it was not possible to adjust the
seat.</Description>
                    <ContributionDegreeNumeric>100.0</ContributionDegreeNumeric>
```

```
                                        <StepD5>
                                            <PlannedCorrectiveAction>
                                                <ActionID>01</ActionID>
                                                <Description>The sub-supplier must immediately use better-quality material. This will eliminate the
problem.</Description>
                                                <VerificationDescription>Stress tests have shown that the material processed was sub-standard and that this
defect will not recur with better-quality material.</VerificationDescription>
                                            </PlannedCorrectiveAction>
                                            <StepD6>
                                                <TakenCorrectiveAction>
                                                    <ActionID>01</ActionID>
                                                    <Description>With immediate effect the sub-supplier is using better-quality material to manufacture
the seat retainer.</Description>
                                                    <StartDateTime>2009-04-01T12:00:00.0Z</StartDateTime>
                                                    <PlannedEndDateTime>2009-04-03T12:00:00.0Z</PlannedEndDateTime>
                                                </TakenCorrectiveAction>
                                            </StepD6>
                                        </StepD5>
                                    </RootCause>
                                </RootCauseAnalysis>
                                <StepD7>
                                    <PreventRecurrenceCorrectiveAction>
                                        <ActionID>01</ActionID>
                                        <Description>The Product FMEA has been revised.</Description>
                                        <StartDateTime>2009-04-09T12:00:00.0Z</StartDateTime>
                                        <PlannedEndDateTime>2009-04-09T12:00:00.0Z</PlannedEndDateTime>
                                        <ResponsibleContactReference>
                                            <PartyID>200000000</PartyID>
                                            <ContactID>03</ContactID>
                                        </ResponsibleContactReference>
                                    </PreventRecurrenceCorrectiveAction>
                                    <StepD8>
                                        <Closure>
                                            <FinalizedEndDateTime>2009-04-13T12:00:00.0Z</FinalizedEndDateTime>
                                            <Description>Closing discussion has been held</Description>
                                        </Closure>
                                    </StepD8>
                                </StepD7>
                            </StepD4>
                        </StepD3>
</ns1:QDXReport8D>
```

5.2.3 Step 3 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-14T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-102</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-14T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000002</ID>
        <Description>The seat adjustment is defective. The seat back cannot be adjusted.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ProcessingNote>The 8D report is rejected because in our view the permanent preventive action (D7) is inadequate. This failure has caused
enormous costs and must not be repeated. Please ensure this for the future !</ProcessingNote>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <AssemblyProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-010</ID>
                    <Name>Seat pan</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-020</ID>
                    <Name>Backrest</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-030</ID>
                    <Name>Coating</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
        </AssemblyProductItem>
        <ComplaintStatus>open</ComplaintStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
            <ResponseDocumentID>8D-00100002</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-13T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>rejected</Status>
        </ResponseStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.2.4 Step 4 : QDXReport8D

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXReport8D xsi:schemaLocation="urn:jai:qdxQDXReport8D:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXReport8D:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-15T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>8D-00100002</DocumentID>
            <IssueDateTime>2009-04-13T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-15T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
            <Organization>
                <Contact>
                    <ID>01</ID>
                    <Name>Hans Mustermann</Name>
                </Contact>
                <Contact>
                    <ID>02</ID>
                    <Name>Rainer Zufall</Name>
                </Contact>
                <Contact>
                    <ID>03</ID>
                    <Name>Klara Fall</Name>
                </Contact>
            </Organization>
        </SellerParty>
    </Header>
    <StepD1>
        <CoreTeam>
            <KeyContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>01</ContactID>
            </KeyContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>02</ContactID>
            </TeamMemberContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>03</ContactID>
            </TeamMemberContactReference>
        </CoreTeam>
    </StepD1>
    <StepD2>
        <ComplaintDocumentID>RM-102</ComplaintDocumentID>
        <ComplaintItemID>BA-10000002</ComplaintItemID>
        <ComplaintItemStatusCode>Accepted</ComplaintItemStatusCode>
        <Quantity unitCode="ST">10.0</Quantity>
        <ComplaintItemDescription>The seat back cannot be adjusted. A broken component in the seat retainer blocks
movement.</ComplaintItemDescription>
        <AcceptedDefectiveQuantity unitCode="ST">10.0</AcceptedDefectiveQuantity>
        <ComplaintAcceptanceIndicator>true</ComplaintAcceptanceIndicator>
        <SupplierProcessStatus>closed</SupplierProcessStatus>
    </StepD2>
    <StepD3>
        <ContainmentAction>
            <ID>01</ID>
            <Description>We are immediately introducing 100% inspection in the shipping department. In this way we will ensure that no more
defective parts are shipped to you.</Description>
            <StartDateTime>2009-04-01T12:00:00.0Z</StartDateTime>
            <DueDateTime>2009-04-30T12:00:00.0Z</DueDateTime>
            <EffectivenessDegreeNumeric>100.0</EffectivenessDegreeNumeric>
        </ContainmentAction>
        <StepD4>
            <RootCauseAnalysis>
                <RootCause>
                    <ID>01</ID>
                    <Description>The root cause analysis reveals that a single batch from a sub-supplier is affected. The sub-supplier used sub-
standard material for the seat retainer, so this was already broken when assembly was carried out. Because of this it was not possible to adjust the
seat.</Description>
                    <ContributionDegreeNumeric>100.0</ContributionDegreeNumeric>
```

```
                                        <StepD5>
                                                <PlannedCorrectiveAction>
                                                        <ActionID>01</ActionID>
                                                        <Description>The sub-supplier must immediately use better-quality material. This will eliminate the
problem.</Description>
                                                        <VerificationDescription>Stress tests have shown that the material processed was sub-standard and that this
defect will not recur with better-quality material.</VerificationDescription>
                                                </PlannedCorrectiveAction>
                                                <StepD6>
                                                        <TakenCorrectiveAction>
                                                                <ActionID>01</ActionID>
                                                                <Description>With immediate effect the sub-supplier is using better-quality material to manufacture
the seat retainer.</Description>
                                                                <StartDateTime>2009-04-01T12:00:00.0Z</StartDateTime>
                                                                <PlannedEndDateTime>2009-04-03T12:00:00.0Z</PlannedEndDateTime>
                                                        </TakenCorrectiveAction>
                                                </StepD6>
                                        </StepD5>
                                </RootCause>
                        </RootCauseAnalysis>
                        <StepD7>
                                <PreventRecurrenceCorrectiveAction>
                                        <ActionID>01</ActionID>
                                        <Description>The Product FMEA has been revised.</Description>
                                        <StartDateTime>2009-04-09T12:00:00.0Z</StartDateTime>
                                        <PlannedEndDateTime>2009-04-09T12:00:00.0Z</PlannedEndDateTime>
                                        <ResponsibleContactReference>
                                                <PartyID>200000000</PartyID>
                                                <ContactID>03</ContactID>
                                        </ResponsibleContactReference>
                                </PreventRecurrenceCorrectiveAction>
                                <PreventRecurrenceCorrectiveAction>
                                        <ActionID>02</ActionID>
                                        <Description>Checks in Goods Receiving have been intensified for this sub-supplier.</Description>
                                        <StartDateTime>2009-04-15T12:00:00.0Z</StartDateTime>
                                        <PlannedEndDateTime>2009-07-15T12:00:00.0Z</PlannedEndDateTime>
                                        <ResponsibleContactReference>
                                                <PartyID>200000000</PartyID>
                                                <ContactID>02</ContactID>
                                        </ResponsibleContactReference>
                                </PreventRecurrenceCorrectiveAction>
                                <PreventRecurrenceCorrectiveAction>
                                        <ActionID>03</ActionID>
                                        <Description>The sub-supplier is being re-audited</Description>
                                        <StartDateTime>2009-04-30T12:00:00.0Z</StartDateTime>
                                        <PlannedEndDateTime>2009-05-14T12:00:00.0Z</PlannedEndDateTime>
                                        <ResponsibleContactReference>
                                                <PartyID>200000000</PartyID>
                                                <ContactID>03</ContactID>
                                        </ResponsibleContactReference>
                                </PreventRecurrenceCorrectiveAction>
                                <StepD8>
                                        <Closure>
                                                <FinalizedEndDateTime>2009-04-15T12:00:00.0Z</FinalizedEndDateTime>
                                                <Description>A further closing discussion has been held.</Description>
                                        </Closure>
                                </StepD8>
                        </StepD7>
                </StepD4>
        </StepD3>
</ns1:QDXReport8D>
```

5.2.5 Step 5 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-16T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-102</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-16T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000002</ID>
        <Description>The seat adjustment is defective. The seat back cannot be adjusted.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ProcessingNote>The 8D report is in order.</ProcessingNote>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <AssemblyProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-010</ID>
                    <Name>Seat pan</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-020</ID>
                    <Name>Backrest</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC200-030</ID>
                    <Name>Coating</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
        </AssemblyProductItem>
        <ComplaintStatus>closed</ComplaintStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
            <ResponseDocumentID>8D-00100002</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-15T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>accepted</Status>
        </ResponseStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.3 Up-dates

Step 1: Auto AG uses a roof lining supplied by Musterlieferant GmbH. This is a JIT/JIS part, for which there is a part number (ABC300-010) and a total of 10 roof linings are rejected. However, in production it is found that the interior light is defective. The roof lining is rejected to Musterlieferant GmbH as a complaint (see Section 0).

Step 2: Musterlieferant GmbH starts its failure elimination process, using the 8D method. After defining an appropriate immediate action, a provisional version of the 8D report is sent to Auto AG (see Section 5.3.2).

Step 3: Based on new information (more defective parts) Auto AG up-dates the data regarding the complaint (see Section 5.3.3).

Step 4: Musterlieferant GmbH takes account of the new information in the 8D report. On completing the failure elimination process the final version of the 8D report is sent to Auto AG (see Section 5.3.4).

Step 5: The 8D report meets Auto AG's expectations. Because no check on effectiveness is required to be carried out, the complaint can be closed directly (see Section 5.3.5).

5.3.1 Step 1 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-03-31T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-103</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-03-31T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000003</ID>
        <Description>The interior light is defective (no light).</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <RequiredResponse>
            <ResponseTypeCode>D3</ResponseTypeCode>
            <DueDateTime>2009-04-02T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <AssemblyProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC300-000Z</ID>
                <Name>roof interior ASS</Name>
            </BuyerProductItemIdentification>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC300-010</ID>
                    <Name>Roof</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC300-020</ID>
                    <Name>Interior light</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
        </AssemblyProductItem>
        <ComplaintStatus>open</ComplaintStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.3.2 Step 2 : QDXReport8D

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXReport8D xsi:schemaLocation="urn:jai:qdxQDXReport8D:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXReport8D:2:0">
	<Header>
		<ControlInformation>
			<GenerationDateTime>2009-04-02T12:00:00.0Z</GenerationDateTime>
		</ControlInformation>
		<DocumentProperties>
			<DocumentID>8D-00100003</DocumentID>
			<IssueDateTime>2009-04-02T12:00:00.0Z</IssueDateTime>
			<RevisionDateTime>2009-04-02T12:00:00.0Z</RevisionDateTime>
			<DocumentStatusCode>Final</DocumentStatusCode>
			<DocumentAuthority>
				<PartyReferenceID>200000000</PartyReferenceID>
			</DocumentAuthority>
		</DocumentProperties>
		<BuyerParty>
			<ID>100000000</ID>
		</BuyerParty>
		<SellerParty>
			<ID>200000000</ID>
			<Organization>
				<Contact>
					<ID>01</ID>
					<Name>Hans Mustermann</Name>
				</Contact>
				<Contact>
					<ID>02</ID>
					<Name>Rainer Zufall</Name>
				</Contact>
				<Contact>
					<ID>03</ID>
					<Name>Klara Fall</Name>
				</Contact>
			</Organization>
		</SellerParty>
	</Header>
	<StepD1>
		<CoreTeam>
			<KeyContactReference>
				<PartyID>200000000</PartyID>
				<ContactID>01</ContactID>
			</KeyContactReference>
			<TeamMemberContactReference>
				<PartyID>200000000</PartyID>
				<ContactID>02</ContactID>
			</TeamMemberContactReference>
			<TeamMemberContactReference>
				<PartyID>200000000</PartyID>
				<ContactID>03</ContactID>
			</TeamMemberContactReference>
		</CoreTeam>
	</StepD1>
	<StepD2>
		<ComplaintDocumentID>RM-103</ComplaintDocumentID>
		<ComplaintItemID>BA-10000003</ComplaintItemID>
		<ComplaintItemStatusCode>Pending</ComplaintItemStatusCode>
		<Quantity unitCode="ST">10.0</Quantity>
		<ComplaintItemDescription>The interior light receives no electrical signal and therefore does not switch on.</ComplaintItemDescription>
		<SupplierProcessStatus>open</SupplierProcessStatus>
	</StepD2>
	<StepD3>
		<ContainmentAction>
			<ID>01</ID>
			<Description>With immediate effect we will ship to you from another plant until we can identify and correct the fault in-
house.</Description>
			<StartDateTime>2009-04-02T12:00:00.0Z</StartDateTime>
			<DueDateTime>2009-04-30T12:00:00.0Z</DueDateTime>
			<EffectivenessDegreeNumeric>100.0</EffectivenessDegreeNumeric>
		</ContainmentAction>
	</StepD3>
</ns1:QDXReport8D>
```

5.3.3 Step 3 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-04T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-103</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-04T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000003</ID>
        <Description>The interior light is defective (no light).</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ProcessingNote>More defective parts have been found.</ProcessingNote>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">20.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <RequiredResponse>
            <ResponseTypeCode>D3</ResponseTypeCode>
            <DueDateTime>2009-04-02T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <AssemblyProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC300-000Z</ID>
                <Name>roof interior ASS</Name>
            </BuyerProductItemIdentification>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC300-010</ID>
                    <Name>Roof</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC300-020</ID>
                    <Name>Interior light</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
        </AssemblyProductItem>
        <ComplaintStatus>open</ComplaintStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
            <ResponseDocumentID>8D-00100003</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-02T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>pending</Status>
        </ResponseStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.3.4 Step 4 : QDXReport8D

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXReport8D xsi:schemaLocation="urn:jai:qdxQDXReport8D:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXReport8D:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-12T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>8D-00100003</DocumentID>
            <IssueDateTime>2009-04-02T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-12T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
            <Organization>
                <Contact>
                    <ID>01</ID>
                    <Name>Hans Mustermann</Name>
                </Contact>
                <Contact>
                    <ID>02</ID>
                    <Name>Rainer Zufall</Name>
                </Contact>
                <Contact>
                    <ID>03</ID>
                    <Name>Klara Fall</Name>
                </Contact>
            </Organization>
        </SellerParty>
    </Header>
    <StepD1>
        <CoreTeam>
            <KeyContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>01</ContactID>
            </KeyContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>02</ContactID>
            </TeamMemberContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>03</ContactID>
            </TeamMemberContactReference>
        </CoreTeam>
    </StepD1>
    <StepD2>
        <ComplaintDocumentID>RM-103</ComplaintDocumentID>
        <ComplaintItemID>BA-10000003</ComplaintItemID>
        <ComplaintItemStatusCode>Accepted</ComplaintItemStatusCode>
        <Quantity unitCode="ST">20.0</Quantity>
        <ComplaintItemDescription>The interior light receives no electrical signal and therefore does not switch on.</ComplaintItemDescription>
        <AcceptedDefectiveQuantity unitCode="ST">20.0</AcceptedDefectiveQuantity>
        <ComplaintAcceptanceIndicator>true</ComplaintAcceptanceIndicator>
        <SupplierProcessStatus>closed</SupplierProcessStatus>
    </StepD2>
    <StepD3>
        <ContainmentAction>
            <ID>01</ID>
            <Description>With immediate effect we will ship to you from another plant until we can identify and correct the fault in-
house.</Description>
            <StartDateTime>2009-04-02T12:00:00.0Z</StartDateTime>
            <DueDateTime>2009-04-30T12:00:00.0Z</DueDateTime>
            <EffectivenessDegreeNumeric>100.0</EffectivenessDegreeNumeric>
        </ContainmentAction>
        <StepD4>
            <RootCauseAnalysis>
                <RootCause>
                    <ID>01</ID>
                    <Description>A wire is broken, so no signal arrives.  The wire is broken by constant friction as the result of an assembly
error.</Description>
                    <ContributionDegreeNumeric>100.0</ContributionDegreeNumeric>
```

```
                                        <StepD5>
                                            <PlannedCorrectiveAction>
                                                <ActionID>01</ActionID>
                                                <Description>The production process is being amended so that the wire cannot be broken in this
way.</Description>
                                                <VerificationDescription>Origin defect in assambling cannot occure anymore because of new assembling
introduction.</VerificationDescription>
                                            </PlannedCorrectiveAction>
                                            <StepD6>
                                                <TakenCorrectiveAction>
                                                    <ActionID>01</ActionID>
                                                    <Description>Correction of production process effects that cutting through the wire cannot occure
anymore.</Description>
                                                    <StartDateTime>2009-04-05T12:00:00.0Z</StartDateTime>
                                                    <PlannedEndDateTime>2009-04-05T12:00:00.0Z</PlannedEndDateTime>
                                                </TakenCorrectiveAction>
                                            </StepD6>
                                        </StepD5>
                                    </RootCause>
                                </RootCauseAnalysis>
                                <StepD7>
                                    <PreventRecurrenceCorrectiveAction>
                                        <ActionID>01</ActionID>
                                        <Description>The Product FMEA has been revised.</Description>
                                        <StartDateTime>2009-04-12T12:00:00.0Z</StartDateTime>
                                        <PlannedEndDateTime>2009-04-15T12:00:00.0Z</PlannedEndDateTime>
                                        <ResponsibleContactReference>
                                            <PartyID>200000000</PartyID>
                                            <ContactID>03</ContactID>
                                        </ResponsibleContactReference>
                                    </PreventRecurrenceCorrectiveAction>
                                    <StepD8>
                                        <Closure>
                                            <FinalizedEndDateTime>2009-04-12T12:00:00.0Z</FinalizedEndDateTime>
                                            <Description>Closing discussion has been held</Description>
                                        </Closure>
                                    </StepD8>
                                </StepD7>
                            </StepD4>
                        </StepD3>
</ns1:QDXReport8D>
```

5.3.5 Step 5 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-13T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-103</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-13T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000003</ID>
        <Description>The interior light is defective (no light).</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ProcessingNote>The 8D report is in order.</ProcessingNote>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">20.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <RequiredResponse>
            <ResponseTypeCode>D3</ResponseTypeCode>
            <DueDateTime>2009-04-02T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <AssemblyProductItem>
            <BuyerProductItemIdentification>
                <ID>ABC300-000Z</ID>
                <Name>roof interior ASS</Name>
            </BuyerProductItemIdentification>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC300-010</ID>
                    <Name>Roof</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
            <IncludedProductItem>
                <BuyerProductItemIdentification>
                    <ID>ABC300-020</ID>
                    <Name>Interior light</Name>
                </BuyerProductItemIdentification>
                <Quantity unitCode="ST">1.0</Quantity>
            </IncludedProductItem>
        </AssemblyProductItem>
        <ComplaintStatus>closed</ComplaintStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
            <ResponseDocumentID>8D-00100003</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-12T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>accepted</Status>
        </ResponseStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.4 Several apparent failures and check on effectiveness

Step 1: Auto AG uses a radio (including CD player) supplied by Musterlieferant GmbH. At the end-of line check on the finished vehicle, however, it is noted that the radio does not take in the CD. The radio is removed and replaced by a fully functional unit. In total ten defective radios (ABC400-010) are discovered and these are sent by Auto AG to Musterlieferant GmbH as a complaint (see Section 5.4.1).

Steps 2a / 2b: Musterlieferant GmbH starts its failure elimination process using the 8D method. In the detailed description of the problem (step D2) it is found that different apparent failures have occurred with the ten CD players which were rejected :

- The sensor does not detect the CD

- The belt which draws in the CD is broken

A separate 8D report is created for each defect and both are sent to Auto AG at the end of the failure elimination process (see Sections 5.4.2 and 5.4.3).

Step 3: Auto AG finds the returned 8D reports to be in order but wishes to carry out a check on the effectiveness of the corrective actions. The 8D report is therefore provisionally accepted in terms of its contents (see Section 5.4.4).

Step 4: Because the effectiveness check was also completed successfully, the complaint can now be closed (see Section 5.4.5).

5.4.1 Step 1 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-03-31T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-104</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-03-31T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000004</ID>
        <Description>The CD player does not take in the CD.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <BuyerProductItemIdentification>
            <ID>ABC400-010</ID>
            <Name>Business Radio (inc. CD player)</Name>
        </BuyerProductItemIdentification>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <ComplaintStatus>open</ComplaintStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.4.2 Step 2a : QDXReport8D-1

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXReport8D xsi:schemaLocation="urn:jai:qdxQDXReport8D:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXReport8D:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-12T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>8D-00100004</DocumentID>
            <IssueDateTime>2009-04-12T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-12T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
            <Organization>
                <Contact>
                    <ID>01</ID>
                    <Name>Hans Mustermann</Name>
                </Contact>
                <Contact>
                    <ID>02</ID>
                    <Name>Rainer Zufall</Name>
                </Contact>
                <Contact>
                    <ID>03</ID>
                    <Name>Klara Fall</Name>
                </Contact>
            </Organization>
        </SellerParty>
    </Header>
    <StepD1>
        <CoreTeam>
            <KeyContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>01</ContactID>
            </KeyContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>02</ContactID>
            </TeamMemberContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>03</ContactID>
            </TeamMemberContactReference>
        </CoreTeam>
    </StepD1>
    <StepD2>
        <ComplaintDocumentID>RM-104</ComplaintDocumentID>
        <ComplaintItemID>BA-10000004</ComplaintItemID>
        <ComplaintItemStatusCode>Accepted</ComplaintItemStatusCode>
        <Quantity unitCode="ST">5.0</Quantity>
        <ComplaintItemDescription>No signal received from sensor, so CD is not taken in.</ComplaintItemDescription>
        <AcceptedDefectiveQuantity unitCode="ST">10.0</AcceptedDefectiveQuantity>
        <ComplaintAcceptanceIndicator>true</ComplaintAcceptanceIndicator>
        <SupplierProcessStatus>closed</SupplierProcessStatus>
    </StepD2>
    <StepD3>
        <ContainmentAction>
            <ID>01</ID>
            <Description>We have introduced a 100% check with immediate effect, until the problem has been resolved.</Description>
            <StartDateTime>2009-04-01T12:00:00.0Z</StartDateTime>
            <DueDateTime>2009-04-30T12:00:00.0Z</DueDateTime>
            <EffectivenessDegreeNumeric>100.0</EffectivenessDegreeNumeric>
        </ContainmentAction>
        <StepD4>
            <RootCauseAnalysis>
                <RootCause>
                    <ID>01</ID>
                    <Description>The sensor contacts are not correctly fixed, resulting in intermittent contact.</Description>
                    <ContributionDegreeNumeric>100.0</ContributionDegreeNumeric>
```

```
                                        <StepD5>
                                                <PlannedCorrectiveAction>
                                                        <ActionID>01</ActionID>
                                                        <Description>The contacts used are sub-standard. Other contacts must be used here, to which the wires can
be fixed better.</Description>
                                                        <VerificationDescription>If the contacts are fixed more firmly this defect can no longer
occur.</VerificationDescription>
                                                </PlannedCorrectiveAction>
                                                <StepD6>
                                                        <TakenCorrectiveAction>
                                                                <ActionID>01</ActionID>
                                                                <Description>Install better-quality contacts, to which the wires can be fixed better.</Description>
                                                                <StartDateTime>2009-04-07T12:00:00.0Z</StartDateTime>
                                                                <PlannedEndDateTime>2009-04-08T12:00:00.0Z</PlannedEndDateTime>
                                                        </TakenCorrectiveAction>
                                                </StepD6>
                                        </StepD5>
                                </RootCause>
                        </RootCauseAnalysis>
                        <StepD7>
                                <PreventRecurrenceCorrectiveAction>
                                        <ActionID>01</ActionID>
                                        <Description>The Product FMEA has been revised.</Description>
                                        <StartDateTime>2009-04-12T12:00:00.0Z</StartDateTime>
                                        <PlannedEndDateTime>2009-04-15T12:00:00.0Z</PlannedEndDateTime>
                                        <ResponsibleContactReference>
                                                <PartyID>200000000</PartyID>
                                                <ContactID>03</ContactID>
                                        </ResponsibleContactReference>
                                </PreventRecurrenceCorrectiveAction>
                                <StepD8>
                                        <Closure>
                                                <FinalizedEndDateTime>2009-04-12T12:00:00.0Z</FinalizedEndDateTime>
                                                <Description>Closing discussion has been held</Description>
                                        </Closure>
                                </StepD8>
                        </StepD7>
                </StepD4>
        </StepD3>
</ns1:QDXReport8D>
```

5.4.3 Step 2b : QDXReport8D-2

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXReport8D xsi:schemaLocation="urn:jai:qdxQDXReport8D:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXReport8D:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-13T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>8D-00100005</DocumentID>
            <IssueDateTime>2009-04-13T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-13T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
            <Organization>
                <Contact>
                    <ID>01</ID>
                    <Name>Hans Mustermann</Name>
                </Contact>
                <Contact>
                    <ID>02</ID>
                    <Name>Rainer Zufall</Name>
                </Contact>
                <Contact>
                    <ID>03</ID>
                    <Name>Klara Fall</Name>
                </Contact>
            </Organization>
        </SellerParty>
    </Header>
    <StepD1>
        <CoreTeam>
            <KeyContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>01</ContactID>
            </KeyContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>02</ContactID>
            </TeamMemberContactReference>
            <TeamMemberContactReference>
                <PartyID>200000000</PartyID>
                <ContactID>03</ContactID>
            </TeamMemberContactReference>
        </CoreTeam>
    </StepD1>
    <StepD2>
        <ComplaintDocumentID>RM-104</ComplaintDocumentID>
        <ComplaintItemID>BA-10000004</ComplaintItemID>
        <ComplaintItemStatusCode>Accepted</ComplaintItemStatusCode>
        <Quantity unitCode="ST">5.0</Quantity>
        <ComplaintItemDescription>The CD player detects the CD but the draw-in mechanism does not operate. It is clear that the belt is
broken.</ComplaintItemDescription>
        <AcceptedDefectiveQuantity unitCode="ST">10.0</AcceptedDefectiveQuantity>
        <ComplaintAcceptanceIndicator>true</ComplaintAcceptanceIndicator>
        <SupplierProcessStatus>closed</SupplierProcessStatus>
    </StepD2>
    <StepD3>
        <ContainmentAction>
            <ID>01</ID>
            <Description>We have introduced a 100% check with immediate effect, until the problem has been resolved.</Description>
            <StartDateTime>2009-04-01T12:00:00.0Z</StartDateTime>
            <DueDateTime>2009-04-30T12:00:00.0Z</DueDateTime>
            <EffectivenessDegreeNumeric>100.0</EffectivenessDegreeNumeric>
        </ContainmentAction>
        <StepD4>
            <RootCauseAnalysis>
                <RootCause>
                    <ID>01</ID>
                    <Description>The drive-belt is porous and has therefore split. The material is sub-standard.</Description>
                    <ContributionDegreeNumeric>100.0</ContributionDegreeNumeric>
```

```
                                    <StepD5>
                                        <PlannedCorrectiveAction>
                                            <ActionID>01</ActionID>
                                            <Description></Description>
                                            <VerificationDescription>A better-quality rubber must be used for the drive-belt in
future.</VerificationDescription>
                                        </PlannedCorrectiveAction>
                                        <StepD6>
                                            <TakenCorrectiveAction>
                                                <ActionID>01</ActionID>
                                                <Description>In future the drive-belt will be in better quality material.</Description>
                                                <StartDateTime>2009-04-16T12:00:00.0Z</StartDateTime>
                                                <PlannedEndDateTime>2009-04-19T12:00:00.0Z</PlannedEndDateTime>
                                            </TakenCorrectiveAction>
                                        </StepD6>
                                    </StepD5>
                                </RootCause>
                            </RootCauseAnalysis>
                            <StepD7>
                                <PreventRecurrenceCorrectiveAction>
                                    <ActionID>01</ActionID>
                                    <Description>The Product FMEA has been revised.</Description>
                                    <StartDateTime>2009-04-10T12:00:00.0Z</StartDateTime>
                                    <PlannedEndDateTime>2009-04-15T12:00:00.0Z</PlannedEndDateTime>
                                    <ResponsibleContactReference>
                                        <PartyID>200000000</PartyID>
                                        <ContactID>03</ContactID>
                                    </ResponsibleContactReference>
                                </PreventRecurrenceCorrectiveAction>
                                <StepD8>
                                    <Closure>
                                        <FinalizedEndDateTime>2009-04-13T12:00:00.0Z</FinalizedEndDateTime>
                                        <Description>Closing discussion has been held</Description>
                                    </Closure>
                                </StepD8>
                            </StepD7>
                        </StepD4>
                    </StepD3>
</ns1:QDXReport8D>
```

5.4.4 Step 3 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-13T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-104</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-13T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000004</ID>
        <Description>The CD player does not take in the CD.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ProcessingNote>The 8D report is accepted. However, the complaint is not yet closed because an effectiveness check has not yet been carried
out.</ProcessingNote>
        <BuyerProductItemIdentification>
            <ID>ABC400-010</ID>
            <Name>Business Radio (inc. CD player)</Name>
        </BuyerProductItemIdentification>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>8DReport</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <ComplaintStatus>open</ComplaintStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
            <ResponseDocumentID>8D-00100004</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-12T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>accepted</Status>
        </ResponseStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
            <ResponseDocumentID>8D-00100005</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-13T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>accepted</Status>
        </ResponseStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.4.5 Step 4 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
        <Header>
                <ControlInformation>
                        <GenerationDateTime>2009-05-13T12:00:00.0Z</GenerationDateTime>
                </ControlInformation>
                <DocumentProperties>
                        <DocumentID>RM-104</DocumentID>
                        <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
                        <RevisionDateTime>2009-05-13T12:00:00.0Z</RevisionDateTime>
                        <DocumentStatusCode>Final</DocumentStatusCode>
                        <DocumentAuthority>
                                <PartyReferenceID>100000000</PartyReferenceID>
                        </DocumentAuthority>
                </DocumentProperties>
                <BuyerParty>
                        <ID>100000000</ID>
                </BuyerParty>
                <SellerParty>
                        <ID>200000000</ID>
                </SellerParty>
        </Header>
        <ComplaintItem>
                <ID>BA-1000004</ID>
                <Description>The CD player does not take in the CD.</Description>
                <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
                <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
                <ProcessingNote>Complaint closed as 8D reports are effective.</ProcessingNote>
                <BuyerProductItemIdentification>
                        <ID>ABC400-010</ID>
                        <Name>Business Radio (inc. CD player)</Name>
                </BuyerProductItemIdentification>
                <ComplainedQuantity>
                        <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
                </ComplainedQuantity>
                <RequiredResponse>
                        <ResponseTypeCode>8DReport</ResponseTypeCode>
                        <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
                </RequiredResponse>
                <ComplaintStatus>closed</ComplaintStatus>
                <ResponseStatus>
                        <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
                        <ResponseDocumentID>8D-00100004</ResponseDocumentID>
                        <ResponseDocumentRevisionDateTime>2009-04-12T12:00:00.0Z</ResponseDocumentRevisionDateTime>
                        <Status>accepted</Status>
                </ResponseStatus>
                <ResponseStatus>
                        <ResponseDocumentTypeCode>QDXReport8D</ResponseDocumentTypeCode>
                        <ResponseDocumentID>8D-00100005</ResponseDocumentID>
                        <ResponseDocumentRevisionDateTime>2009-04-13T12:00:00.0Z</ResponseDocumentRevisionDateTime>
                        <Status>accepted</Status>
                </ResponseStatus>
        </ComplaintItem>
</ns1:QDXComplaint>
```

5.5 Short-form findings report (QDXShortConfirmation)

Step 1: Auto AG uses headlights (ABC500-010) supplied by Musterlieferant GmbH. After a certain time, defects occur in a number of vehicles which have already been sold (field failures) : the dipped beam no longer works. Auto AG rejects 20 defective headlights to Musterlieferant GmbH. A short-form findings report is required instead of a full 8D report (see Section **0**).

Step 2a / 2b: Having carried out checks, Musterlieferant GmbH can see that half of the headlights have a defect in the electrics, for which the supplier is responsible. In the other parts there are clear signs of damage caused by violence. However, the warranty period has expired for all the parts. Because there are two different failures, Musterlieferant GmbH sends two findings reports (see Sections 5.5.2 and 5.5.3).

Step 3: Both findings reports are accepted by Auto AG and the associated complaint is closed (see Section 5.5.4).

5.5.1 Step 1 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-03-31T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-105</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-03-31T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000005</ID>
        <Description>The headlights are defective. Dipped beam no longer operates.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <FieldFailureIndicator>false</FieldFailureIndicator>
        <BuyerProductItemIdentification>
            <ID>ABC500-010</ID>
            <Name>Headlight to front right</Name>
        </BuyerProductItemIdentification>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">20.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>ShortConfirmation</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <ComplaintStatus>open</ComplaintStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

5.5.2 Step 2a : QDXShortConfirmation-1

```
<?xml version="1.0" encoding="UTF-8"?>
<qdxrsm:QDXShortConfirmation xsi:schemaLocation="urn:jai:qdxQDXShortConfirmation:2:0 QDXShortConfirmation-1.2.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:qdxrsm="urn:jai:qdxQDXShortConfirmation:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-12T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>SC-0001</DocumentID>
            <IssueDateTime>2009-04-12T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-12T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintReferenceDocument>
        <ID>RM-105</ID>
        <ComplaintItemAcceptance>
            <ComplaintItemID>BA-1000005</ComplaintItemID>
            <ComplaintItemStatusCode>Accepted</ComplaintItemStatusCode>
            <Quantity unitCode="ST">10.0</Quantity>
            <AcceptedDefectiveQuantity unitCode="ST">5.0</AcceptedDefectiveQuantity>
            <AcceptanceIndicator>true</AcceptanceIndicator>
            <FindingResult>The wiring is sometimes poorly positioned and the protective sleeve can melt because of heat. However, the headlights
covered by this complaint are outside warranty. Nevertheless, based on goodwill, we accept half of the headlights in the complaint.</FindingResult>
            <SupplierProcessStatus>closed</SupplierProcessStatus>
        </ComplaintItemAcceptance>
    </ComplaintReferenceDocument>
</qdxrsm:QDXShortConfirmation>
```

5.5.3 Step 2b : QDXShortConfirmation-2

```
<?xml version="1.0" encoding="UTF-8"?>
<qdxrsm:QDXShortConfirmation xsi:schemaLocation="urn:jai:qdxQDXShortConfirmation:2:0 QDXShortConfirmation-1.2.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:qdxrsm="urn:jai:qdxQDXShortConfirmation:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-04-12T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>SC-0002</DocumentID>
            <IssueDateTime>2009-04-12T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-04-12T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>200000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintReferenceDocument>
        <ID>RM-105</ID>
        <ComplaintItemAcceptance>
            <ComplaintItemID>BA-1000005</ComplaintItemID>
            <ComplaintItemStatusCode>NotAccepted</ComplaintItemStatusCode>
            <Quantity unitCode="ST">10.0</Quantity>
            <AcceptedDefectiveQuantity unitCode="ST">0.0</AcceptedDefectiveQuantity>
            <AcceptanceIndicator>false</AcceptanceIndicator>
            <FindingResult>The bulbs were wrongly installed. In addition the contacts were damaged.</FindingResult>
            <SupplierProcessStatus>closed</SupplierProcessStatus>
        </ComplaintItemAcceptance>
    </ComplaintReferenceDocument>
</qdxrsm:QDXShortConfirmation>
```

5.5.4 Step 3 : QDXComplaint

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:QDXComplaint xsi:schemaLocation="urn:jai:qdxQDXComplaint:2:0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns1="urn:jai:qdxQDXComplaint:2:0">
    <Header>
        <ControlInformation>
            <GenerationDateTime>2009-03-31T12:00:00.0Z</GenerationDateTime>
        </ControlInformation>
        <DocumentProperties>
            <DocumentID>RM-105</DocumentID>
            <IssueDateTime>2009-03-31T12:00:00.0Z</IssueDateTime>
            <RevisionDateTime>2009-03-31T12:00:00.0Z</RevisionDateTime>
            <DocumentStatusCode>Final</DocumentStatusCode>
            <DocumentAuthority>
                <PartyReferenceID>100000000</PartyReferenceID>
            </DocumentAuthority>
        </DocumentProperties>
        <BuyerParty>
            <ID>100000000</ID>
        </BuyerParty>
        <SellerParty>
            <ID>200000000</ID>
        </SellerParty>
    </Header>
    <ComplaintItem>
        <ID>BA-1000005</ID>
        <Description>The headlights are defective. Dipped beam no longer operates.</Description>
        <AppearanceDateTime>2009-03-30T12:00:00.0Z</AppearanceDateTime>
        <PartsPerMillionRelevanceIndicator>true</PartsPerMillionRelevanceIndicator>
        <ProcessingNote>The findings report is accepted. The complaint is therefore closed</ProcessingNote>
        <FieldFailureIndicator>false</FieldFailureIndicator>
        <BuyerProductItemIdentification>
            <ID>ABC500-010</ID>
            <Name>Headlight to front right</Name>
        </BuyerProductItemIdentification>
        <ComplainedQuantity>
            <RejectedQuantity unitCode="ST">10.0</RejectedQuantity>
        </ComplainedQuantity>
        <RequiredResponse>
            <ResponseTypeCode>ShortConfirmation</ResponseTypeCode>
            <DueDateTime>2009-04-14T23:59:59.0Z</DueDateTime>
        </RequiredResponse>
        <ComplaintStatus>closed</ComplaintStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXShortConfirmation</ResponseDocumentTypeCode>
            <ResponseDocumentID>SC-0001</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-12T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>accepted</Status>
        </ResponseStatus>
        <ResponseStatus>
            <ResponseDocumentTypeCode>QDXShortConfirmation</ResponseDocumentTypeCode>
            <ResponseDocumentID>SC-0002</ResponseDocumentID>
            <ResponseDocumentRevisionDateTime>2009-04-12T12:00:00.0Z</ResponseDocumentRevisionDateTime>
            <Status>accepted</Status>
        </ResponseStatus>
    </ComplaintItem>
</ns1:QDXComplaint>
```

6 Downloads

The reduced pressure from technical reasons, process diagrams "Overview of the entire process" (Figure 2.2.1), "Sub-process„ 8D method" (Fig. 2.4.1) and "Sub-process“ Rejecting a complaint (Figure 2.6), are available as free download at the following address: http://www.vda-qmc.de/downloads

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