Quality Management Guideline for Suppliers

Appendix

Instructions for the Preparation of 8D-Reports

	Originator	Approval
Area	Central QC	Central QC
Name	Schuchardt	Kaldeberg
Date	2009-04-01	2009-04-01
Signature		

Contents

1 Introduction

Problems can appear in any process the result of which can lead to defective processes. Such defects can have differing characteristics which in turn will have differing results. Such defects can have negative results in both internal and external processes.

Clear differences reveal themselves when dealing with process defects, ranging from a massive covering up to minimize a problem, to a progressive handling of the situation.

Essentially, we would like to achieve two goals with these instructions. The first is to arouse the awareness that process performance errors offer the chance to discover defects in a process, therefore enabling suitable permanent corrective measures to be found. The second goal is to simultaneously develop an analytic solution guide.

Working with these instructions can give the impression that the individual instructions are for your “particular defect far too grandiose“. For example the discovering of short measurement of „Total Length“ in the Goods Receiving department. The Failure of an assembly component in the field looks completely different of course meaning that such single item defects must also be reflected upon.

2 The-8 Discipline-Method (8-Steps)

The 8-Diziplinen method is an analytic solution approach developed particularly for the car and automobile ancillary industry as an instrument for finding solutions to defects. This method can be particularly successfully when applied to a special or sporadic defect. In such cases the defect can be temporary or limited, it appears only in a limited number of products and the cause for the failure is not apparent. It is also possible that the defect has appeared in the past, but is not evident at the moment.

The essential treatment for this method of defect solving is the assembling of an interdisciplinary team who have access to the necessary experts, the solving method relying on two basic components:

1. A theoretical analysis of the available information of the defect and its effects, with the object of establishing theoretical cause/s.
2. A practical valuation by checking the cause theories against the actual defect behavior.

The result of the defect analysis is summarised into a report, the 8D-report. In this report the results are documented to the differing 8-disciplines and therefore allow a comprehensive overview of the defect, thus leading to a solution.

In the appendix of these instructions there are two 8D-reports. Both were provided for the same defect description. The example "A" shows an incorrect example "B" a correct assessment.

3 The 8-disciplines

3.1 Defect definition

The defect definitions/description is divided into - symptom and defect descriptions.

3.1.1 Symptom description

This field is completed by the customer and contains the customer description of the product defect along with the basic conditions of how the defect was detected. The description of the basic conditions at the time of the defect appearance is important for the assessor of the 8D-report. This will enable a simulation of the prevailing onditions at the time of the product failure.

3.1.2 Defect description

This field is completed by the assessor of the 8D-report and is probably one of the most difficult duties for the assessor, because it decides the success of all following steps. The defect description serves in describing how the specifications, drawings or other technical information deviate from the norm. At this point it is not necessary to explain the reasons for such divergences, but rather to determine the technical cause of the defect. This unusually results in the product being dismantled and inspected, and deviations form the specifications being noted in detail. According to the gravity and complexity of the defect It may be necessary to examine the fine details of the physical conditions of the parts being examined.
It is necessary to reconstruct the basic conditions as they occured at the time of the defect and describe them as accurate as possible. The defect description must explain, why that symptom originated, along with unequivocal technical conditions that must exist for the reproduction of the defect. Analysis of the recognised defect must explain the appearance of the symptom.

3.2 Team Structure

An efficient and affective defect treatment is only possible with the right team structure, and although this is not needed for all defects, it is carried out according to the individual defect and is absolutely necessary for the solving of complicated defects. The defect condition determines which competences the team must consist of, and if it is realized that other competence should be included then the team must be organised accordingly. It is of course possible to integrate temporarily competences to the team during the defect assessment.

3.3 Temporary measures

It should be understood that measures are taken toward a defect condition without knowing the cause, and the temporarily measure taken must prevent that this defect does not occur in further defect parts being delivered to the customer. There must be an unambiguous connection found between the temporarily measure and the defect.

Questions:
Have the immediate measures, (temporary measure), prevented defective parts reaching the customer. Suitable documented verification must be available to demonstrate the effectiveness of the temporary measures and are to include the implementation date.
To this end all deliveries made after the introduction of the measures are to be provided with a green sticker that indicates - description of the measure, date, name and signature.

Example:
Part length 100 % inspected
2007-07-28, Mr. Sample-man, signature

3.4 Cause of Defect(s)

Discovering the cause of a defect is obviously the most difficult part, and it must be considered that there may possibly be more than one cause for the defect. Standard assessment sheets are available that give a systematic approach to establishing the defect causes(s). Nevertheless, practice shows that one can determine the cause of a defect by asking the question “why”, 5 times. The following questions must be asked when it is believed that the defect cause has been determined –

Questions:
Does the defect cause explain the appearance of the defect?
In what percentage proportion has does the single cause have on the total defect?

Suitable evidence must be available, (if necessary test documentation), to prove that the ascertained reason is the actual cause of the defect.

It must also be decided where the defect occurred. i.e., it is a matter of finding the place where I should have recognised the defect. The documentation must indicate the point where the defect occurs (see point 3.7).

3.5 Permanent Remedial Measures

In order to remove the defect, the permanent remedial measures can be constructive measures or measures which refer to the process surrounding the disturbances. i.e., it is a matter of preventing a recurrence of the defect cause. It is essential to verify the effectiveness of the introduced measures on the defect, and it is conceivable that more than one solution must be initiated to totally remove the defect cause. Here must the following questions utilised

Questions:
Do the remedial measures prevent the renewed appearance of the cause?
Which portion in percent does it have in the removal of the defect cause?
Who is responsible for the implementation?
From when (date) will the measures be implemented?

The permanent remedial measure must technically explain why the cause does not appear any more. The effectiveness must be proven with tests. I.e., the remedial measures must remove the cause, not generate it.

It must be taken into consideration that if constructive or process-condition change measures are to be taken, that they cannot lead to further defect causes that result in a renewed failure of the product. To this end a further investigation must take place to verify that the permanent changes do not have any adverse effects.

3.6 Successful control (proof of the effectiveness)

This is where the evidence is documented as to the effectiveness of the remedial measures. The results of the effectiveness inspections are to be documented and made available.

It is also necessary to ensure that the product is clear of the defect symptom when used by the customer. Should the defect still be evident, then it must be assumed that either the actual defect cause was not detected, or that further defects can also cause this problem, or the remedial measures taken are ineffective and therefore other possibilities must be sought.

So that we can follow the results of the corrective measures, we need to determine the exact date of the first rectified delivery along with the delivery note number and the delivery date. The first delivery of rectified products is to be marked with green stickers on which “our complaint number” is indicated.

3.7 Inspection/ Document changes

When the defect cause and the time of defect have been identified, the documentation must be checked for accuracy and modified accordingly. Documents that have been changed must include the date of change and the name of the person responsible for the changes. The changed documents are to be made available to us by request or to be present within the scope of an inspection visit.

3.8 Transferability of the defect solution

This point deals with checking whether the ascertained defect cause can also lead to failures with other components. It must be determined if the defect is possible with similar assemblies or components, manufactured with identical or similar processes.

4 Praising the Teams

In some of the 8-disciplines documentation forms in circulation this point is explicitly dealt with, although we have decided to remove it. This is not because we feel that it is not necessary, rather that we wanted to renounce the platitude which one can find in such comments

However, at this point we would like to make two encouraging statements –

- to congratulate the team members on their successful result
- To pass and review the findings on to all team menbers

5 Further Applicable Documentation

- Vorwerk Form 8D-Report
- Completed 8D-Report positives example
- Completed 8D-Report negatives example

negatives Beispiel

VORWERK AUTOTEC

OBERE LICHTENPLATZER STR. 336
D-42287 WUPPERTAL
TELEFON (0202) 560-0 • TELEFAX 0202-560 560

8D-REPORT

Nr. No.	VAT-2007/W 001	Ausstelldatum Issue date	01.01.2007	Lieferant Supplier	xxx

Autotec-Teile-Nr. Autotec-Part-No.	xxxx	**Autotec-Zeichng.-Nr.** Autotec-Drawing-No.	xxx
Autotec-SAP-Nr. Autotec-SAP-No.	xxxx	**Aussteller** Issuer	Herr Mustermann
Reklamationsmenge Complaint Quantity	2.0000	**Ihre Lieferschein-Nr.** Your Delivery Note No.	xxx

1. Problemdefinition / (Problem definition)

A. Symptombeschreibung [Kunde] / (Symptom definition) [Customer]

Türgummiprofil konnte nicht verbaut werden, da zu lang. SOLL: 2000mm ±10mm IST: 2011 -2018mm

B. Problembeschreibung [Lieferant] / (Problem definition) [Supplier]

Länge SOLL: 2000 ±10mm IST: 2011 -2018mm

2. Team (Name, Abt., Telefonnummer) / Team (Name, Dept., Phonenumber)

Teamleiter (Team leader) Max Mustermann
Teammitglieder (Team members) xxx

3. Temporäre Maßnahmen (sofort) Containment Action(s)	Einführungsdatum Effective Date	Verantwortlich Responsible
Mitarbeiterunterweisung	sofort	QS

4. Fehlerursache(n) Root Cause(s)	Anteil am Problem in % Contribution of the problem in %
Mitarbeiterfehler, Anschlag wurde nicht justiert.	100%

5. Permanente Abstellmaßnahme(n) Implemented Corrective Action(s)	Einführungsdatum Effective Date	Wirksamkeit in % Effectivness in %
Mitarbeiterunterweisung	sofort	50%
Erststückprüfung	sofort	50%

6. Erfolgskontrolle / Evaluation

Nachweis der Wirksamkeit Verification of efficiency	Verantwortlich Responsible	Prüfdatum Control Date
Keine weiteren Reklamationen	QS	sofort
Erste Lieferung nach Einführung der Abstellmaßnahme First Delivery after implemention of Corrective Actions Lieferschein-Nr. / Delivery Note No.:	Menge Quantity	Eintreffdatum Arriving Date

7. Überprüfung/Änderung der Dokumente / Check/Change of documents

Änderung erforderlich? Alteration neccessary?	Ja Yes	Nein No	Änderungsdatum Revision Date	Verantwortlich Responsible
Arbeitsanweisung / Work Instruction	☐	☐		
Arbeitsplan / Production Schedule	☐	☐		
Konstruktions-FMEA / Design-FMEA	☐	☐		
Prozess-FMEA / Process-FMEA	☐	☐		
Prüfanweisung / Checking Instruction	☐	☐		
Prüfplan / Control Plan	☐	☐		
Verpackungsanweisung / Packaging Instruction	☐	☐		

8. Übertragbarkeit der Problemlösung Problem Applicable	Einführungsdatum Effective Date	Verantwortlich Responsible
keine		

01.01.2007	Herr Mustermann	xxxx/xxxxxx	xxxx
Abschlussdatum / Closing Date	Bearbeitet von / Reported by	Telefon / Phone	Unterschrift / Signature

Wir erwarten den 8D-Report beantwortet zurück bis / The 8D-Report is due to: 15.01.2007

positives Beispiel

VORWERK AUTOTEC

OBERE LICHTENPLATZER STR. 336
D-42287 WUPPERTAL
TELEFON (0202) 560-0 • TELEFAX 0202-560 560

8D-REPORT

Nr. No.	VAT-2007/W 001	Ausstelldatum Issue date	01.01.2007	Lieferant Supplier	xxx

Autotec-Teile-Nr. Autotec-Part-No.	xxx	**Autotec-Zeichng.-Nr.** Autotec-Drawing-No.	xxx
Autotec-SAP-Nr. Autotec-SAP-No.	xxx	**Aussteller** Issuer	Herr Mustermann
Reklamationsmenge Complaint Quantity	20.000 Stück	**Ihre Lieferschein-Nr.** Your Delivery Note No.	xxx

1. Problemdefinition / (Problem definition)

A. Symptombeschreibung [Kunde] / (Symptom definition) [Customer]
Türgummiprofil konnte nicht verbaut werden, da zu lang. SOLL: 2000mm ±10mm, IST: 2011-2018mm

B. Problembeschreibung [Lieferant] / (Problem definition) [Supplier]
Länge SOLL: 2000mm ±10mm, tST:2011-2018mm

2. Team (Name, Abt., Telefonnummer) / Team (Name, Dept., Phonenumber)

Teamleiter (Team leader) Max Mustermann
Teammitglieder (Team members) xxx

3. Temporäre Maßnahmen (sofort) Containment Action(s)	Einführungsdatum Effective Date	Verantwortlich Responsible
Lagerbestand gesperrt, Lagerbestand zu 100% auf Länge überprüft.	01.01.2007	Herr Mustermann

4. Fehlerursache(n) Root Cause(s)	Anteil am Problem in % Contribution of the problem in %
Längenanschlag hat sich verschoben, weil sich die Verschraubung des Endanschlages am L-Profil der Ablängvorrichtung gelöst hat. (Kraftschluss)	100%

5. Permanente Abstellmaßnahme(n) Implemented Corrective Action(s)	Einführungsdatum Effective Date	Wirksamkeit in % Effectivness in %
1. Nachjustierung des Anschlages	15.01.2007	100%
2. Der Endanschlag wird mittels eines federgelagerten Bolzens in einer Bohrung am L-Profil der Ablängvorrichtung arretiert.(Formschluss)	15.01.2007	100%

6. Erfolgskontrolle / Evaluation

Nachweis der Wirksamkeit Verification of efficiency	Verantwortlich Responsible	Prüfdatum Control Date
Dokumentation der fertigungsbegleitenden Prüfungen in SPC-Karte.	Herr Mustermann	15.01.2007
Erste Lieferung nach Einführung der Abstellmaßnahme First Delivery after implemention of Corrective Actions	Menge Quantity	Eintreffdatum Arriving Date
Lieferschein-Nr. / Delivery Note No.: 1130/07	20.000	25.01.2007

7. Überprüfung/Änderung der Dokumente / Check/Change of documents

Änderung erforderlich? Alteration neccessary?	Ja Yes	Nein No	Änderungsdatum Revision Date	Verantwortlich Responsible
Arbeitsanweisung / Work Instruction	☒	☐	15.01.2007	Frau Mustermann
Arbeitsplan / Production Schedule	☐	☒		
Konstruktions-FMEA / Design-FMEA	☐	☒		
Prozess-FMEA / Process-FMEA	☒	☐	15.01.2007	Frau Mustermann
Prüfanweisung / Checking Instruction	☐	☒		
Prüfplan / Control Plan	☒	☐	15.01.2007	Frau Mustermann
Verpackungsanweisung / Packaging Instruction	☐	☒		

8. Übertragbarkeit der Problemlösung Problem Applicable	Einführungsdatum Effective Date	Verantwortlich Responsible
Auf alle Profile, die auf dieser Ablängvorrichtung gefertigt werden.	31.01.2007	Herr Mustermann

01.02.2007	Herr Mustermann	xxxx/xxxxxx	xxxx
Abschlussdatum / Closing Date	Bearbeitet von / Reported by	Telefon / Phone	Unterschrift / Signature

Wir erwarten den 8D-Report beantwortet zurück bis / The 8D-Report is due to: 15.01.2007

6 List of Changes

Date	Index	Description of Changes

7 Literature List

Regius from, B.: Quality in the product development, Munich Vienna, in 2006