

**J.H. BUSCHER, INC.**  
**Standard Specification SS00K**  
**CORRECTIVE ACTION REQUESTS**  
Revision A, April 18, 2001

Written By:	Date:	Approved By:	Date:
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**REVISION STATUS and CONTENTS**

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Reason for Change: To require and document CAR follow-up. Description of Change: 1) Added default duration for addressing request (Sections 2, 3). 2) Added column to Table 2 and Corrective Action Log. 3) Combined Cover Page and Contents/Revision Page.

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## 0) SCOPE

This document defines Root Cause, Root Cause Analysis, Corrective Action and establishes Corrective Action procedure and format.

## 1) ROOT CAUSE ANALYSIS AND CORRECTIVE ACTION

### 1.1) Root Cause

A Root cause is an initiating cause in a chain of events that leads to an identified outcome. All effects have causes, but causes are only of interest to us if they are *identifiable* and *within our means to control*. If the cause of a power outage is a lightning strike, it is beyond our control. We would identify the *root* cause of the power failure as lack of lightning protection.

### 1.2) Analysis and Problem Identification

Root Cause Analysis is an investigation to find out how and why an undesired event occurred in order to prevent recurrence. There may be more than one root cause, or a problem may not have an identifiable root cause. A problem is a preventable obstacle, an ineffective process or an undesired outcome. A set of circumstances identified as a problem is not necessarily one.

- a. Identification of problems and root causes is to be done by individuals empowered to take corrective action, with advice and counsel from other interested parties.
- b. Define the problem(s) both the qualitatively and quantitatively. Is the problem isolated to the item(s) under review or possibly undetected in other products or processes? Which products, grouped by PN, manufacture date, component material, etc. are affected? Assess the scope of the problem – if it is a problem at all. A set of conditions might give the appearance of a problem.
- c. Compile evidence and a timeline of events ending in the problem(s). Find when action or inaction resulted in the problem. Based on history and similar processes, identify obvious errant steps.
- d. Identify and investigate other potential conditions that could be root causes. An effect may have more than one cause.

### 1.2) Corrective Action

A corrective action is what needs to be done to go from problem to solution. Identify corrective action(s) that – with reasonable confidence – prevent recurrence of each ill effect. Consider the risks of the proposed actions. A single solution may address more than one problem, or a single problem may require more than action. A solution may be not be perfect, but presents the best combination of improvement and minimal ill effects among alternatives. Our objective is to find the simplest most effective corrective action(s).

- a. Identify proposed corrective actions solutions that prevent recurrence with reasonable certainty, are within our control and do not create new problems. Simplicity is always preferred.
- b. Implement and observe the recommended correction(s). Does the proposed solution work *and* not create new problems?

## 2) CORRECTIVE ACTION REQUESTS

In the event that any problem arises that is representative of a group of parts or end products, a **Corrective Action Request** – a formal inquiry into what is believed to be a problem – may be initiated. This Specification covers processing of the Corrective Action Request (CAR). Although initiated

internally, the source of the CAR can be external – from a customer or vendor, or internal – from a JHBI employee.

The Quality Department will either respond to the request or assign departmental responsibility. The Quality Department is responsible for maintaining all CARs and responses, although the response to a CAR will come from the applicable department.

**3) APPLICABILITY**

Any employee can institute a Corrective Action Request, either at his or her own discretion, or on behalf of a customer or vendor. The CAR need not be part of a formal customer request – the belief in the need for product corrective action is all that is needed. However, in the event of a formal customer request for corrective action, (e.g. FRACA), a CAR must be initiated.

**4) FORMAT**

There are effectively two parts to a Corrective Action Request: the request and the response. See Table 1 for definitions of the entries for both parts. A request requires four responses: a cause, a plan for correction, a due date and effectivity for correction. However, because this is a request subject to adjudication, it may be decided that no problem exists, or a problem exists but the cause cannot be determined, or that the problem is isolated, and formal corrective action may not be necessary at JHBI. In such cases, the appropriate response may be that no action is necessary. See the examples in Table 2.

**4.1) Response Duration**

A default duration of two months is given for addressing the request. This period may be adjusted as required by the cognizant engineer or program manager.

**4.2) Initiation**

An employee wishing to initiate a CAR can either provide the request entries – in any written form – to the Quality Department. In the absence of a written request, the COR\_ACT file may amended at the time of request.

**4.3) Spreadsheet Format**

A Corrective Action Log will be kept as a spreadsheet file maintained by the Quality Department – called COR\_ACT.xxx (extension depending on file format). This file log sheet has entries as shown in Table 1. Every CAR requires its own line. This file is to amended for every new CAR.

<i>Column</i>	<i>Description</i>
<b><i>Request Entries</i></b>	
CAR Number	The Number of the Corrective Action Request. The number is the last 2 digits of the year, followed by three alphanumeric characters, (0-9, then A-Z excluding I and O) logged out in order, similar to the detail part numbering system.
Problem	A description of the problem in a part, process or product. Corrective action is not addressed here, only the effect – the problem statement.
P/N	The JHBI Part Number - this can be an end product or a component. If more than one P/N is involved, include only PN(s) observed with problems. Allow investigation to reveal similar affected parts.

Requested By:	Name of person, department, or outside company requesting Corrective Action. This can be any employee, a customer or vendor.
Date:	Date of Request.
Due Date:	Date the CAR must be addressed by. If no notation is made by the due date, the corrective action is flagged "OVERDUE".
<b><i>Response Entries, Made by the Responder after Investigation of the Request.</i></b>	
Cause	The <i>root cause</i> reason of the problem (See 1.1). Cases may arise that the cause is undetermined. If so, this should be noted. If a detailed explanation is required, correspondence or a report is to be referenced.
Corrective Action	See 1.2. Plan to solve the problem. This may be a drawing change, procedure change, recommendation to the customer, etc. In the cases where the answer is very short, the corrective action will be in the log file. In other cases, a report will be referenced. As with cause, a particular corrective action may not be in order if the investigation produced no obvious plan. If so, this should be noted.
Effectivity	The extent of the corrective action. Parts made after a particular date, or by SN, etc. Recall or rework information – if any – goes here.
Sign-offs	Names or initials of representatives of responding department and QA, along with dates of review.

**TABLE 1  
CORRECTIVE ACTION REQUEST LOG ENTRIES**

CAR NO.	Problem	PN:	Request By:	Date:	Due Date	Cause:	Corrective Action:	Effectivity:	Sign-off & Date	QA Sign-off & Date
952C9	Spool is binding in sleeve	WDXXX Sleeve/ Spool Assy	Joe Jones	7/10/95	9/10/95	Improper cold stabilization after heat treat	Advise Jake's Heat Treat of findings, Proper procedure to be followed 7-19-95 and after	All WDXXX & WDXXY assemblies after 7-19-95	Jane Smith 7-12-95	E.Johnson 7-13-95
952CA	Excessive Leakage at Null	B4XXZ	Bill's Aircraft (Debbie S.)	7/11/95	9/11/95	No excessive leakage found – returns are within spec. Flow meter calibrated correctly	None at JHBI. Advise Bill's Aircraft of findings	N/A	Al Brown 7-15-95	PMF 7-15-95
952CB	Coils shorting	VARIOUS	ACE Fuel Systems (Roger K.)	7/17/95	9/17/95	See Report R9503C	See Report R9503C	All coils PN SDYXX, SDYXY	Jane Smith 7-22-95	JPA 7-26-95
952CC	Order Qty. is not staggered	FD2XX, FD2XY	East Otto Tool Works. (Ted Burkowski)	7/21/95	9/21/95		<b>OVERDUE</b>			

**TABLE 2, EXAMPLES OF CORRECTIVE ACTION LOG ENTRIES**

Note that a corrective action is not always called for. A perceived problem is nor necessarily a problem. If it is not, it should be so noted.

Requests are made by the Quality Department, at the behest of any employee. If the request comes from an outside company, the request would come from the JHBI contact, whose name is noted parenthetically in the "Request By:" column. The response entries will be made by a representative of the appropriate department - administrative matters will be handled by Accounting, Production Control, etc., technical matters by Engineering or Program Management.

Corrective Action Requests should be addressed within two months from the date of request. If they are not, the spreadsheet will automatically flag the entry, and the master Quality Agenda for immediate attention.

Depending on the complexity of the problem, a response may be long in coming. If a response is anticipated to take longer than two months, a notation should be made under the response entries, listing estimated response date. This notation should be made within 30 days of the request.

## **5) RESPONSE**

Responses are required to *all* Corrective Action Requests; see Table 2. Remember that a response to a CAR is not necessarily a corrective action. A request is not a mandate.

### **5.1) Internal CARs**

In the event of a CAR from a JHBI employee, the appropriate Department Manager is responsible for communicating the results of the request to the initiator. Response can be in any form.

### **5.2) Customer CARs**

For customer initiated CARs, the Sales or Engineering Department Managers are responsible for customer notification of the investigation results.

### **5.3) Vendor CARs**

For vendor initiated CARs, the appropriate Department Manager – Purchasing, Engineering or Manufacturing – is responsible for vendor notification of the investigation results.