

Beta's Quality System



Contents of presentation

- Intro to Beta's quality management system
 - Quality policy, certification, and continual improvement
 - Product testing
 - CPAR: Corrective and preventative action request
 - Stop Work Order
- Efficient handling of any future issues

Quality Management System

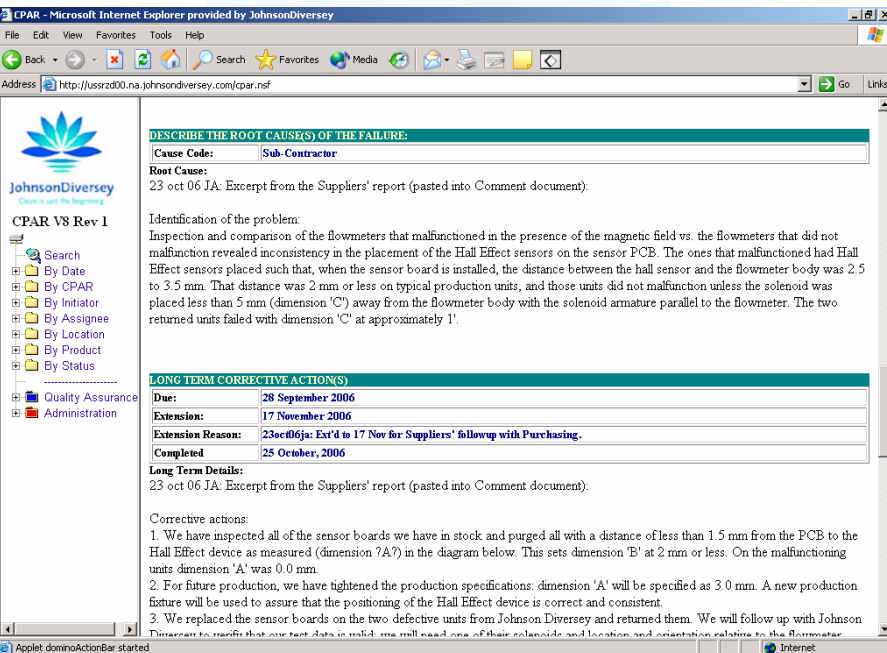
- Quality policy:
 - We are committed to deliver quality in design, manufacture and delivery. We believe all quality incidents are preventable and our ultimate target for them is zero.
- Quality certification: We received an ISO9001 in October of 2000
- Continual quality improvements:
 - Quality objectives
 - Corrective and preventive actions
 - Internal audits
 - Review of customer satisfaction surveys and associated action items
 - Operational meetings producing improvement actions



Product Testing

- All units are 100% mechanically and/or electrically tested at Final Assembly to ensure proper assembly.
 - Printed Circuit Boards are 100% electrically tested at the supplier and Beta performs a visual inspection at receipt.
 - Motor gear box assemblies are electronically tested during their assembly process to verify current draw.
 - Wire assemblies undergo a pull test to assure a solid mechanical connection and the final assembly test checks for proper electrical connection

CPAR: Correction & Preventive Action Request



CPAR data is reviewed for trends at monthly and quarterly meetings

- Our CPAR system is a quality issue database
- Quality issues are entered into the database when they are brought up by customers or internal employees
- The database allows for a structured follow up to problems
 - Quick responses to problems are to be provided to the initiator (often you the customer) within 48 hours
 - The database allows us to track investigations into root causes of problems
 - CPAR's remain open until long term corrective actions are determined. If they are open too long, they automatically get forwarded up the chain of command to the company president, so problems can't slip through the cracks

SWO: Stop Work Order

Quality problems shown to effect a significant % of units shipped prompt a stop work order.

- Product covered by the SWO immediately stops shipping
- Until a short term corrective action to fix the problem is determined, product doesn't ship
- Determining the short term corrective action to close the SWO is the highest priority in the company

Magik - Flex Form - Microsoft Internet Explorer provided by JohnsonDiversey

View All Save

SWO Cover QF7-3-044

form info

| | |
|---------------|--------------------------------|
| Job #: | 4712 |
| Job Priority: | Highest |
| Job Title: | HTI abnormally rapid gear wear |
| Date Started: | 05/09/2007 15:24:24 |
| Description: | HTI Motor Gear Wear |

Section A

SWO Class CPAR #

Initiate

Initiator Date (MM/DD/YY) Authorized By Date (MM/DD/YY)

Product Line Product Other

Product Information

| | | | | | |
|--------|---------------------------------------|-------------|--|-----------|---|
| Item # | <input type="text" value="1207734*"/> | Description | <input type="text" value="GR MOT, 24VDC, 200RPM"/> | Drawing # | <input type="text" value="15149-00 B"/> |
|--------|---------------------------------------|-------------|--|-----------|---|

Description / Reason

One Reworked 200 rpm Motor (Ref. SWO 4540) has failed Engineering life test @ 48 hours. Inspection shows the teeth on the smaller gear of the Spur gear assembly (038852) in the gearbox are ~95% worn off - i.e. less than ~5% of the gear teeth remain. Two more from same reworked lot on life test were opened and the same gear was found to be in various stages of degradation also.

Efficient future handling of any issues

- We are committed to resolving all quality concerns as quickly and effectively as possible
- We request your help for any future resolution by reporting to us with as much detail as possible:
 - Type of problem being experienced
 - Whether unit is new or how long it has been in the field
 - Provide parts with suspect quality back to us so we can do a detailed analysis to determine root cause as quickly as possible

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