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| DeltaTech Controls | DOCUMENT: Supplier Quality Requirements Manual |
| Approved by: ASHWIN SHAH | REVISION: G |

SUPPLIER QUALITY REQUIRMENTS MANUAL (SQRM)



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PURPOSE

The purpose of this manual is to provide Suppliers with the DeltaTech Control (DTC) requirements for various items related to the purchase of products/components and or tooling.

SCOPE

This manual applies to all Suppliers providing parts and components to DTC

REFERENCES DOCUMENTS

SREA Form

PPAP Requirement per QS 9000 PPAP Manual latest revision

ISO/TS 16949 Standards

ISO 9000 Standards

Workmanship standards

REQUIREMENTS

6.1 GOVERNMENT, SAFETY, AND ENVIRONMENT REGULATIONS

Supplied material is to comply with current government and safety constraints on restricted, toxic, and hazardous materials, as well as, environmental, electrical, and electromagnetic considerations applicable to the country of manufacture and sale. Material Safety Data Sheet (MSDS) will be provided with each shipment of products that require MSDS

Certificate of Origin will be supplied annually for each part number. This certificate will be provided by November 15th for the following year. The Certificate of Origin will be provided for any new part with the first shipment. Sales taxes or other taxes are not applicable for any products, components or tooling unless approved by DTC.

6.2 DTC PURCHASE ORDER

Suppliers will receive a Purchase Order from DTC. The PO will outline the DTC part number, DTC drawing number and revision level of the drawing, quantity on order and requested ship date.

1) Suppliers are responsible to verify that they have the drawing and revision level (shown on the PO) on file and are able to comply with the requirements as stated on the drawings. In the event that the correct drawings or revision level are not available then Supplier will request DTC to provide these documents.



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2) Supplier will send acknowledgment to DTC confirming the acceptance of Purchase Order for the product on order and Purchase Order terms. Suppliers are required to have 100% on-time delivery performance. In the event that due date on the purchase order cannot be met then Supplier will send notification via fax or scanned and e mail to DTC upon receipt of the Purchase Order.

3) On the day of the shipment of product Supplier will notify (Advanced Shipping Notice – ASN) DTC via fax, e mail or EDI the part number and quantity in the shipment. Supplier will also provide method of shipment and associated tracking number.

NOTE:

Freight charges for any products shipped after the mutually agreed due date and without prior approval from DTC, shall be paid by the suppliers for next day delivery. Additionally, late shipments that result in production shutdown or significant disruptions to DTC operations will warrant a recovery charge of any expense incurred due to delayed delivery. The supplier will provide corrective action (8D format) for this delayed delivery within 48 hours after shipment of parts.

6.3 QUALITY SYSTEM

All Suppliers are required to develop their quality system using compliance to the TS 16949 Standard requirements as a goal.

Registration to the latest version of the ISO 9000 Quality Management Series of Standards, and/or TS 16949 fulfills this requirement.

6.4 CUSTOMER-SUPPLIED PRODUCT

Verification of Customer Supplied Product by our organization does not absolve our Supplier of the responsibility to provide conforming product.

6.5 CRITICAL AND CONTROL CHARACTERISTICS

The critical characteristics are designated by “*” or upside down triangle. These characteristics are important for the function of the parts. During the initial tooling qualification the process capability needs to meet minimum value of 1.67 and during normal production the capability needs to meet minimum value of 1.33. In addition these parameters need to be monitored during manufacturing of each lot shipment.

The Control characteristics are designated by “@” or upside down triangle with a circle. These characteristics are important for the function of the parts and to assure tooling capability. Process capability at the initial tooling qualification needs to meet minimum value of 1.67 and at annual revalidation to meet minimum value of 1.33.



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6.6 FIRST ARTICLE AND PPAP REQUIREMENTS

This section is applicable for all new component manufactured from tooling funded by DTC and or tools transferred by DTC from other suppliers.

DTC Design Engineering ensures the part print clearly defines the requirements for each part.

DTC Design Engineering shall determine the critical and control characteristics and/or note(s), which require capability studies.

The Supplier is responsible for reviewing the drawing and applicable requirements and communicating any capability or design issue prior to start of the tooling.

Once the material, tooling and processes are finalized and intended to be used on future production, PPAP will be submitted by the supplier to DTC. PPAP submission will consists of the following documents:

- a) Signed Product Submission Warrant (PSW)
- b) Process flow chart, Process Failure Mode and Effects Analysis (PFMEA) and Control Plan
- c) After the tooling, process and material is finalized then 100 pieces (in case of multi cavity tooling 100 shots) samples will be made. Full dimensional measurements on all cavities (in case of only one cavity tool then measurements on two pieces) as shown on DTC released prints will be taken from these parts. The format of report will show DTC nominal and tolerance and difference between DTC nominal and actual measured value. All measurements must meet the print requirements.
- d) From the 100 pieces stated in item c) the capability studies on all critical and control characteristics defined on DTC print will be performed using a samples size of 30 pieces for each cavity. The required capability is minimum 1.67 on all critical and control characteristics shown on DTC print and all control characteristics identified by Supplier to control lot to lot variations.
- e) Gage R and R studies for the measurements of the characteristics noted on the print as critical and control.
- f) Laboratory accreditation if external laboratory is used for measurements
- g) Process setup and work instruction that will be used for production processes
- h) Appearance approval report for surfaces that will be exposed in the final product
- i) Ballooned DTC print.
- j) Minimum of 30 pieces or five shots of parts



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- k) Certificate or RoHS Compliance
- l) Retention of master samples at the vendor

In the event any of the above requirements cannot be met then the Supplier will submit SREA form together with part samples for DTC disposition per Section 6.12. DTC will review and sign the SREA form authorizing further action by the vendor. PPAP cannot be submitted unless all characteristics are met as is on DTC prints or signed SREA form has been received by the vendor.

Production parts shipment will not be made until the PPAP has been approved by DTC or Supplier has received a signed SREA form for limited production shipment.

No changes by supplier or its sub suppliers to tooling, material, processes or facilities or use different sub supplier will be made by the supplier without pre approval by DTC quality representative. Supplier will submit any request for changes using SREA form. The request for change will be considered approval by DTC only when it is signed by an authorized person form DTC.

Supplier will secure and build a 3 month “bank” of sufficient quantity of parts that has been mutually agreed upon by supplier and DTC before any changes can take place.

Supplier will submit a revised PPAP for DTC approval prior to beginning of production shipment from the approved changes. Specifically when the supplier request for change involves the following:

- a) Use of material other than what was used in the previously submitted PPAP and part approval
- b) Production from new or modified tooling
- c) Rearrangement of facilities
- d) Use of a different equipment other then the one used for initial PPAP submission
- e) Change subcontractor for material, parts or services
- f) Similar changes as listed a thru e listed above by supplier’s subcontractor

If there are any questions as to whether PPAP submission is required the supplier shall contact the DTC quality representative for confirmation.



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6.7 YEARLY LAYOUT REPORT

Annual revalidation is required for all products on which PPAP documentation was submitted and approved under section 6.9. The annual PPAP will consist of same documentation as outlined under section 6.9 with the following exceptions:

The dimensional report will on at least one third of all the dimensions shown on the print.

Data using equal number of samples (10) from the previous three lots can be used for Cpk studies.

These reports will be sent to DTC manufacturing location attention of Quality Department.

6.8 MAINTAINING PROCESS CONTROL

The Supplier shall maintain process controls so that a minimum Cpk of 1.33 can be achieved on all critical and control characteristics shown on the DTC drawings and specification and in accordance with supplier control plan using generally accepted statistical process control methods. In the event there are multiple cavities in the tooling these control and critical characteristics will be monitored on each cavity.

The frequency of these critical and controlled characteristics will be as outlined in the supplier control plan.

The measuring equipment used will be accurate within 10% of the tolerance allowed for the characteristics to be measured.

Supplier shall use Zero Acceptance Sampling plans (C=0), unless otherwise approved by DTC.

6.9 DATA SUBMISSION WITH EACH SHIPMENT

Following information will be sent with each shipment of product lot that is custom manufactured for DTC.

- a) Certificate of compliance certifying that the material or parts meets the requirement of DTC drawings and specification and Purchase Order terms.
- b) Initial set up, in process and final inspection data showing measurements of critical characteristics shown on DTC drawing and vendor selected critical characteristics.
- c) Copies of latest process control charts for the critical characteristics.
- d) If there has been any changes to Process FMEA and or Control plan then these updated documents will be sent with the next lot shipped.
- e) Copy of the signed SREA (or Temporary Deviation Authorization issues by DTC) in the event the parts are deviated from DTC print and specification.

Following information will be sent with each shipment of “off the shelf” product



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- a) Material certificate that will signify that the material meets the requirement of published specification and DTC Purchase Order terms.

Marking required on the outside of the box:

The main label on the outside of each box will contain the following information

- a) DTC Purchase Order number
- b) DTC part number
- c) Quantity in each box
- d) SREA number or DTC TEO number if applicable.
- e) In the event non conformance were found in the previous lot shipment and formally notified by DTC then at least the next five lots will be certified by marking on the outside of the box that the product was either sorted or manufactured after implementation of corrective actions to eliminate the defect.

6.10 TOOLING TRANSFER

No tooling will be transferred to another location without prior approval of DTC. A full PPAP approval is required per section 6.9.

6.11 TOOLING MAINTENANCE

Unless agreed upon during the quotation stage Supplier is expected to maintain and or replace tooling at its own expense to maintain form, fit, function and appearance

6.12 SUPPLIER REQUEST FOR ENGINEERING APPROVAL (SREA)

The Supplier Request for Engineering Approval Form (SREA) is originated by the Supplier and may be used to initiate a permanent or temporary Engineering Change request. This will provide a formal document for initiating a Supplier Requested Change.

The Supplier is required to fill out the Supplier Request for Engineering Approval Form with pertinent information for the change request. Upon completion of supplier driven information, the form together with sample parts shall be forwarded to DTC Design Engineering for approval of change. DTC Design Engineering shall review the request and notify the supplier of approval or rejection of the request. Notification shall normally take place within 5 days. The Supplier shall not ship changed product to DTC or its sub-contractors until the SREA is approved. Once approved, material may be shipped, but must include a copy of the approved SREA form with each shipment.

6.13 CHANGE NOTIFICATION & TRACEABILITY



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When ECN (Engineering Change Notice) is initiated and implemented by DTC request, supplier shall notify the appropriate Buyer and Supplier Quality Engineer in advance prior to shipping the first lot affected by the change. Notification shall include P/N . Qty, PO #, ECN # and new part revision. Additionally, copy of the ECN or other appropriate mean of identification shall be attached to identify the initial shipment affected by the change.

The Supplier shall maintain a record of all changes made that require approval and must be able to trace changes to s specific date code and or serial number.

6.14 DEVIATIONS/WAIVERS

Material that has been found by the Supplier to be nonconforming may be submitted for acceptance ("Use as is" disposition) to DTC, under the Nonconforming Material and Corrective Action Process.

DTC may charge a nominal fee to process each Deviation, unless the defect or condition is shown to be the responsibility of DTC Formal Corrective Acton shall be required.

Material shipped under a Deviation/ Waiver shall be properly identified on each shipping container.

Note: A deviation may not be used in place of a SREA.

6.15 SHIPMENT OF NON CONFORMING PRODUCTS

When non conforming product is found by DTC, Supplier will be notified via e mail or faxes the details of the nonconformance. The Supplier will respond within 24 hours with the acceptance of the nonconformance and chosen disposition

Any products and components found to be non-conforming at DTC incoming inspection or manufacturing process will be rejected and the supplier will be notified via e mail, fax or telephone. Upon receipt of the notification, supplier shall respond within 24 hour the acceptance of the notification and selected disposition. The options for disposition of rejected non conforming material are as follows:

a) Return defective material. Supplier to provide and RMA # and freight account number. DTC to issue a debit memo and supplier to replace defective parts with confirmed conforming product per the

Previously agreement with DTC purchasing.

b) The Supplier may choose to send personnel or hire an approved local 3rd party sorting company to sort and or rework the product at DTC location. Supplier response should be in such a way that disruption to DTC operations is minimized.

c) Sort and rework of non conforming product by DTC personnel at a rate of \$80 per hour. Supplier will be billed the sorting charges upon completion of the sorting activity.



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The Supplier will be expected to provide a formal corrective actions plan within seven days of the receipt of the initial notice of the non-conformance. In addition any cost incurred by DTC for the delays caused by the non conforming product will be recovered from the Supplier. A debit memo will be issued and deducted from supplier invoice

Supplier will certify and identify that the next five lots shipped are free of the non-conformance.

6.16 SUPPLIER ACCESS

DTC reserves the right of access to Supplier facilities and their sub-suppliers for review of purchased product, processes and records. The right of access is extended to our customer and regulatory authorities.

6.17 RECORD RETENTION

Suppliers are responsible for maintaining records that material has been manufactured in accordance with the terms of the Purchase Order for a period of no less than 2 years. The Supplier must be able to produce evidence of this requirement upon request.

Suppliers are responsible for maintaining inspection and test records, including SPC data in accordance with the Quality Planning for each lot. Records are maintained for the life of the part plus 2 years. The Supplier will make these records available upon request by DTC

6.18 SUPPLIER COMMUNICATION:

Suppliers are expected to send their management representative to our manufacturing plant once a year to review supplier score cards and continuous improvement efforts.

6.19 QUALITY RECORDS

| Record | Owner | Retention Time |
|---------------------------|--------------|---------------------------------------|
| DTC/FAI Template | Engineering | 3 years or life of the part or tool |
| Inspection & Test Records | Supplier | Life of the part or tool plus 2 years |

REVISIONS



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| Revision | Changes |
|-----------------|--|
| A | Initial Release |
| B | Added supplier access and record retention |
| C | Multiple changes |
| D | Multiple Changes |
| E | Multiple changes |
| F | Multiple changes |
| G | Multiple changes |



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| Supplier Request for Engineering Approval | | | |
| SUPPLIER NAME AND ADDRESS: | | | |
| SUPPLIER CONTACT NAME and PHONE #: | | | |
| DATE OF REQUEST: | | | |
| DELTA TECH CONTROLS PART NUMBER(S) AFFECTED: | | | |
| DESCRIPTION OF CHANGE: CURRENT: | | | |
| PROPOSED: | | | |
| ATTACHMENTS: | | | |
| REASON FOR CHANGE: | | | |
| DELTA TECH CONTROLS TO COMPLETE | | | |
| APPROVED: () YES () NO TEMPORARY UNTIL _____ OR PIECES _____ PERMANENT () | | | |
| ECN / DEVIATION NUMBER: | | | |
| DELTA TECH APPROVAL 1 NAME: POSITION: | DATE | DELTA TECH APPROVAL 2 NAME: POSITION: | DATE |
| REASON FOR REJECTION OR QUALIFYING CONDITIONS OF ACCEPTANCE: | | | |
| DELTA TECH CONTROLS COMMENTS: | | | |



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Supplier - Complete "Supplier Section" and email to Quality System Manager at:
ashwin.shah@coactive-tech.com

Notice of Acceptance and Agreement

Company name: _____

Address: _____

**Reviewed and accepted by:
Quality Manager**

Signature: _____ Date: _____

Name: _____ Phone # _____

Production Manager

Signature: _____ Date: _____

Name: _____ Phone # _____

Plant Manager

Signature: _____ Date: _____

Name: _____ Phone # _____