VP Sales and Marketing	Date	Purchasing Manager	Date
VP Engineering	Date	VP Production	Date
President	Date	ISO Representative	Date

Revision 01: Revisions include: 1) Changes in some of the responsibilities, 2) Adding the notification step to the process, 3) Communicating the change request electronically, and 4) The addition of all three policies.

Purpose: 1) To establish an effective means of communicating engineering changes; 2) To ensure that consideration is given to outstanding purchase orders, current and pending production, and to the contact terms of existing sales orders before engineering change are implemented; and 3) To prevent unauthorized changes from being implemented.

Explanations:

Engineering changes apply to drawings, cutter paths, and production routings. They can be either temporary, as in the case when a customer approves a "one time" minor deviation to a part in order to accommodate material or process conditions that are delaying production; or they can be a permanent changes, as in the case of a design change requested by the customer.

ECR stands for Engineering Change Request and ECN for Engineering Change Notice, which is the announcement that the change has been implemented. Both are documented on the same form.

There can be several different reasons for initiating an ECR. The customer may request a change, someone in production may identify a better approach to producing a part, or an engineer may recommend a design improvement, all of which are initiated with an ECR.

All of the engineering change communication is done electronically through the use of e-mail using the ECR/ECN Form located in the Engineering Forms folder of the Administration network directory.

Policies:

1. Engineering changes that affect form, fit, or function require documented approval from the customer.
2. Engineering changes may not be implemented without an ECR number.

Instructions:

1. The <u>person initiating the change</u> is responsible for filing and forwarding an ECR/ECN Request to the VP Engineering. This requires:

a. Providing a reason for the request,
b. Establishing the change status (permanent or temporary),
c. Providing basic production and technical information, including part number, drawing number, and if appropriate, the production work order number, and
d. Providing as much background information as possible, including determining:
   i) If there are any parts in production or scheduled to go into production,
   ii) If there are parts on hold,
   iii) If the change is holding up production, or
   iv) If there are any outstanding purchase orders affected by the change.

2. The VP Engineering or designee is responsible for determining whether to proceed with or reject the ECR based on considerations of product function and appearance, and process costs.
3. If the ECR is rejected, the VP of Engineering or designee is responsible for sending the initiator the ECN explaining the reason for the rejection.
4. If the ECR is approved and doesn't affect the form, fit, or function of the part, and doesn't affect the status of production orders, then proceed to step 7.
5. If the change affects the status of a production order or alters the form, fit, or function of the part, the VP Engineering or designee is responsible for notifying the Sales Engineer.
6. The Sales Engineering is then responsible for obtaining and retaining documented approval from the customer to proceed, and for notifying the VP Engineering of the customer's decision.
7. The VP Engineering or designee is then responsible for:
   a. Establishing whether the change is permanent or temporary.
   b. Issuing an ECR number,
   c. Developing an estimated completion date, and
   d. Notifying the initiator and others affected by the request, including purchasing, production, and the Sales Engineer that the request has been approved.
8. The Sales Engineer is then responsible for notifying the customer of changes that may affect the status of production orders.
9. The VP Engineering or designee is responsible for:
   a. Notifying the initiator and everyone else that may be affected by the request when the engineering work on the change has been completed, and
   b. Retaining the ECR/ECN records.

Related Procedures: None

Retained Documents: 04-041 ECR/ECN Reports – VP Engineering
ECR Customer Approval – Sales Engineer