



LIFE CYCLE MANAGEMENT

SUMMARY OF CROSSCONTROL LIFE CYCLE MANAGEMENT PROCESS

REVISION 0.6 | 2023-10-20

PRODUCT LIFE CYCLE POLICY

CrossControl AB products are designed for use in industrial vehicles and heavy equipment with long life cycles and long service life. This means that demands on reliability and availability are high; CrossControl products typically have life cycles of 15 years or more.

Our product life cycles are influenced by many factors such as component availability and technology development. CrossControl always strives to keep the products up-to-date with maintained backwards compatibility.

In order to manage the products in a structured way during the lifetime, CrossControl has established a **product life cycle policy** over a series of product life cycle phases. Within this scope, CrossControl is committed to notify customers of any change in product life cycle status well in advance, in order for customers to be able to plan their operations in an efficient way.



PRODUCT LIFE CYCLE PHASES

A PRODUCTS LIFETIME IS DIVIDED IN PHASES WITH DIFFERENT ACTIVITIES AND OPPORTUNITIES. **BELOW YOU FIND THE DEFINITION OF THESE PHASES.**

YEAR 0



01 DEVELOPMENT

- Products in Development state can be used for different types of tests such as functional tests, preliminary in-design tests and software development.
- There can be functionality changes both in form fit and function before a product is released for serial production.
- Products in Development state are not fully tested and are not covered by warranty. We therefor recommend that they are not used commercially.
- Products in Development state shall not be used for safety-critical applications.

02 SERIAL PRODUCTION

- State for product in normal serial production.
- This is the default state and is therefor not expressed specifically in e.g. price lists and offers.
- During Serial Production, a product will normally have several upgrades/revisions. Read more on Revisions in section below.

03 NRND - NOT RECOMMENDED FOR NEW DESIGN

- The NRND phase is entered 9-20 months before a product enters Phase-out.
- It is strongly recommended that products in this state are not applied in new projects.
- A product in NRND state is normally replaced by a succeeding product.
- Please consult CrossControl for recommended succeeding/alternate product.

04 PHASE OUT

- When a product is approaching phase out state, a PCN (Product Change Notification) will be communicated to all customers that have purchased the product during the last 24 months. A part of that information will be an offer for a LTB (Last Time Buy) purchase, allowing customers to secure product availability beyond the official End Of Production date. Customers are also offered to place orders for components required to support after-market needs (service and repair).

- The PCN including LTB information is communicated 6-15 months before the LTB date.
- The phase out state means that serial production is ramped down. Majority of production will be LTB orders.

05 END OF PRODUCTION - SERVICE ONLY

- In this state, service and repair of earlier produced units is performed. There is no production of new units.
- This period is normally 5 years or longer. Some spare parts can be missing when approaching end of this phase, unless handled in the phase out component planning.

06 OBSOLETE

- In this state, the product is not supported anymore.



LIFE CYCLE MANAGEMENT RELATED ACTIVITIES

OTHER ACTIVITIES WITHIN LIFE CYCLE MANAGEMENT:

REVISIONS

There will be revisions of different size and reasons during a products life time. Reasons for revisions can for example be replacement of obsolete components, production improvements or feature enhancements.

Revisions that affect form, fit or function will be notified via PCN in time before product changes with information on any necessary actions.

PCN – PRODUCT CHANGE NOTIFICATION

PCN will be sent to inform customers about changes in a products form, fit and function. PCN is also sent for other life cycle changes that can affect customers such as Phase out etc.

Prior to entering the Phase out state, a PCN containing information about dates for LTB (Last Time Buy) and LSD (Last Shipment date) is communicated to customers.

This PCN will also contain information about successor and alternative products.

CUSTOMIZED PRODUCTS

This category of products include:

- Products where customer owns the IP rights.
- Products developed specifically for a certain customer where CrossControl owns the IP rights.
- Frozen product versions – Products where CrossControl in agreement with customer has frozen a certain revision of the product and supplies it to the customer in question only.

Customized products will be handled with the standard product life cycle management process as a base, but specific agreements may prevail.