BOSCH
Invented for life

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GENERAL HANDLING OF THE PUSH BELT

In general any load on a belt or a mechanical force onto the belt should be avoided. In order to prevent any damage of the belt during internal transport at the customer, the following must be observed:

- The critical area for handling is the side of the belt (see Figure 1). Always avoid loop to loop contact between belts, and loop contact with hard sharp edges.
- Never disassemble a belt (this is to prevent loops becoming damaged when removing and replacing the loop set into the belt). When the belt has been disassembled for any reason whatsoever, it is recommended not to use this belt in a customer application.
- Use gloves (plastic) in order to protect:

  1. The skin of the hands from the oil on the belt.

  2. The belt from the filth of the hands, which can cause contamination on the belt

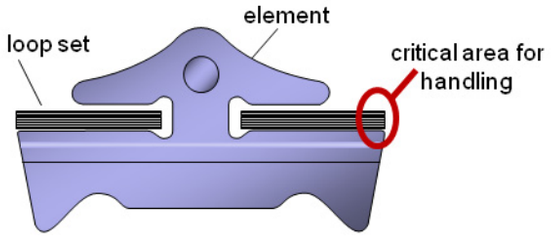

Figure 1: Cross-section of pushbelt

Caution: when handling the belt, great care is required to always avoid mechanical contact with the sides of the loops, which is considered one of the critical areas of the belt.

Mechanical contact with the sharp edges of the pulley surfaces or other transmission components can easily cause sharp dents on the loop sides. Sharp dents on loop side can result in belt failure and consequently in loss of drive.

STORAGE AND PACKAGING

The storage facilities must assure a clean storage, free from any contact with rain, dirt, any kind of chemicals, etc. In general any load on a belt or a mechanical force onto the belt should be avoided.

Before packaging, belts are dipped in ATF oil type-Exxonmobil EZL 799. The belts are packed individually in a plastic, sealed VCI (Volatile Corrosion Inhibitor) bag. These sealed belts are packed in a standard Bosch carton box, which is placed on a Europallet.

Note that for AA purposes the standard carrier is the Europallet, throughout this document the more generic term CBS (Carton Box Carrier) unit will be used. The above mentioned packaging is the Bosch standard packaging for the push belt .

It is possible that customer packaging deviates from the one mentioned above, only after agreement between Bosch and the customer.

The exact type of packaging, dimensions and weight of the boxes and CBS unit can be found in Attachment B: “Packaging Datasheet”.

When belts are stored at the customer it is important to comply with following statements:

- Never stack more than 3 CBS-units, of the same type, on top of each other. The stacking of different types is never allowed.
- To ensure stability of the boxes during internal transport it is recommended to never lift more than one CBS-unit at a time in warehouse or transporting truck.
- The maximum number of carton boxes stored on each other must not exceed the number of carton boxes which are on each other in the CBS-unit.
- The maximum number of belts placed on each other must not exceed the number of the belts in one carton box. These belts must always be separated by a carton separator between each belt and stored in their original position (see Attachment B: “Packaging Datasheet).
- When belts arrive at the customer site check if the packaging is undamaged. If this is not the case, contact GS-CT by phone or by sending a “report packaging defect” (Attachment C).
- The belts must be stored in their original packaging.This packaging can not be modified.
- Only remove the packaging from the belt just prior to assembly in the transmission.
- Don’t store unpacked belts at the variator as-

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sembly station.

- Repacking of the belts must not be done at the-customer site, without an agreement between Bosch and the customer. In case repacking is done without the fixed agreement and damages occur to the push belts, Bosch cannot be held responsible.
- Remove packaging with care. Make sure there is no contact between the cutter and the belt. Unpacking of the belts can be done in two different ways, depending on the size of the VCI bag. Attachment A, shows both ways of unpacking the push belt.
- When unpacking the belt take care that the loop sets do not fall out of the belt. Correct belt handling is shown in Attachment A.
- Do not remove the oil in which the belt is preserved.

These recommendations are not only valid during storage, but also during internal transport at the customer.

BELT TYPE IDENTIFICATION AND REPLACEMENT FOR AA PURPOSES

Before packaging at Bosch, each belt is marked with a belt number. This number is divided in three parts:

1. Belt type; a 6 digits number starting with a 9.
2. Assembly date; a 4 digit number, where the first 2 digits stand for the production year and the following two figures for the production week.
3. 4 digit code; for traceability of sub parts used in the belt (Bosch internal)

Below the traceability code an oblique line is drawn. This line makes it easier to recover the belt code if the belt fails in a vehicle.

For AA purposes, the belt type identification number is crucial for determining suitable replacement. A belt must be replaced by a product hat has the same belt type number (first 6 digits starting with a 9). If identical replacement is not in stock, please contact your local sales organisation for suitable replacement belt.

PROCESS AUDITS IN SERIES PRODUCTION

The production of the push belt; element production, loop set production and belt assembly is controlled through the Control Plan (CP). The CP is a standard Bosch internal document which describes incoming inspections, the control of measurements and product test, during production. The Control Plan is not submitted during PPAP.

ASSESSMENT OF PRODUCTS RETURNED FROM THE FIELD

The possibility arises that a belt fails, because of unknown reasons or system defects. If this happens, the customer should directly contact the QMM department of the Bosch GS-CT plant in Tilburg, to prevent secondary damages on the damaged belt, which could jeopardise root cause analysis. To support the customer to find the root cause of the failure, it is important for Bosch to have as much information as possible. This means not only information and hardware pertaining to the belt itself, but also all information that relates to the “Conditions of use” and the operating conditions at the time of the field failure must be submitted. A list of all the hardware and information that needs to be submitted by the customer can be found in Attachment D: Field Failure Information Checklist.

In case of complaints, the product is declared free of fault if:

- Data and hardware are not submitted or incomplete according attachment D: Field failure information checklist
- Product has not been handled, stored or used according to the agreements specified in this TCI

LIST OF ATTACHMENTS

A. Push belt user manual
B. Packaging datasheet AA
C. Report Packaging Defects b
D. Field Failure Information Checklist