MAINTENANCE MANUAL

REBLOC® ROAD RESTRAINT SYSTEMS

for:

REBLOC RB100SF_8_H4b/W4

REBLOC RB100SFS_8_H4b/W5

1. General

The REBLOC® vehicle restraint system is very maintenance friendly. There are no required loose parts and the connecting coupling is integrated into the elements. Thus, the REBLOC® system provides maximum safety against vandalism. Basically the system is maintenance-free and no regular maintenance work is required. Visual inspections on visible damages have to be carried out on a regular basis.
Maintenance work may be necessary after a vehicle impact. Depending on the severity of the impact there are various scenarios:

1) If there are only scratches and / or abrasion marks visible but no cracks and no deflection of the system no maintenance / repair works is necessary.

2) If there is no damage / crack formation visible and the system has been displaced, it is sufficient to replace the effected barriers in their original location (see installation instructions). Therefore the single elements have to be removed and the shear force beam (incl. positon securing) examined on damages. If there are any visible damages, the elements have to be replaced or refurbished.

3) If there are cracks with a width > 0,2 mm or parts of the reinforcement exposed because of concrete spalling the functionality of the barrier is ensured. Nevertheless to ensure durability the affected barriers must be replaced or refurbished.

4) When there are severe cracks (> 2 mm) and / or severe concrete spalling and / or damage / deformations are visible to the connection coupling, the barrier system functionality can no longer be guaranteed, the effected safety barriers elements must be replaced immediately.

The remarks above also apply to the terminal elements and their anchorage. It is extremely important in cases of potential damage to the anchoring foundation to inspect the anchoring bolts and the anchoring plate.

2. Anchoring system

Following point 1.2, 1.3 or 1.4 the shear force beam and when applicable the position securing (adhesive anchors) must be examined after the removal of the damaged elements.

If there are any damages, the shear force beam has to be replaced or/and the adhesive anchors newly fitted. The positioning of the elements have to be carried out according to installation instructions RB100SF_8_H4b/W4 bzw. RB100SFS_8_H4b/W5.

3. Dilatation system

When applicated on a bridge the dilatation system must be checked after an impact. Remove the dilatation steel cover plate, measure the gap length between the two dilatation elements and compare the after crash length with the pre-set gap length. In case of a change in the gap length, the system must be removed and reinstalled to achieve the pre-set gap length.

The dilatation elements must be checked for cracks and damage and replaced if necessary. Replace / exchange the dilatation elements ensuring that the precise pre-set gap length X between the expansion joint elements remains – this was / should be provided by the original project contractor. The functionality of the expansion-joint coupling must also be checked and inspected after a collision. If the expansion-joint coupling does not expand / contract to the predefined parameters (temperature change elongation / contraction), the expansion-joint coupling must be repaired / replaced to achieve correct functionality.

4. Bridge Parapet / Bridge Structure

Depending on the severity of the impact of a heavy vehicle into the bridge safety barrier system the bridge parapet / bridge structure must be inspected by the appropriate contractor/ bridge design engineer.

5. Durability

Concrete C30/37 is used in the REBLOC® vehicle restraint system, the concrete cover is as indicated by EN 13369 / EN 1992-1-1. The concrete exposure class is dictated by the climate and local environmental conditions.
In the temperate zone, where the application of thawing salt occurs in the winter season the concrete class XF4 according to EN 206 is applied.

All exposed steel parts, in particular the connection coupling, are hot-dipped galvanized in accordance with EN ISO 1461. Climate and environmental-related requirements of the construction site are considered as de-icing salt is used in the temperate zone. Here the climate and environment-related requirements of the installation location are taken into account, which in the temperate zone applies to the use of road salt according to the above specifications.
In accordance with the evaluation methods EN ISO 1461 and EN 206-1 REBLOC® Concrete Barriers can be considered to have a life cycle of twenty-five years in minimum depending on the weather and environmental conditions.

6. Environmental Recycling

The disposal of a REBLOC® Concrete Barriers unit should incorporate all appropriate recycling principles. The steel parts (reinforcement, tension bars and connecting coupling) of the barrier should be mechanically separated from the concrete. Each material type being environmentally recycled through approved recycling companies.
There are no regulated substances within the REBLOC® road restraint system.

7. Applicable documents

Datasheet REBLOC RB100SF_8_H4b/W4
Datasheet REBLOC RB100SFS_8_H4b/W5
Datasheets special elements to the corresponding systems
Installation instructions REBLOC RB100SF_8_H4b/W4
Installation instructions REBLOC RB100SFS_8_H4b/W5

REBLOC GmbH
Wiener Straße 662 · 3571 Gars/Kamp · Austria
Tel.: +43 (0) 2985 30528 2900
Fax: +43 (0) 2985 30528 2901
office@rebloc.com