

## Suggestion - IKEA Apa module for On30 model railroading

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Recently introduced to Gnatterbox ingenious usage of the IKEA APA storage box, this gave me no rest. I definitely liked the idea. However, modelling On30 and not Gn, the Gnatterbox standard, loading APA on the side was not giving me the space for the "landscaping" I needed. But if placing the unit as intended? On30 can live with low overhead and if not mounting the front, one gets a diorama like module. After studying an existing APA, I happened to have, it looked feasible, leading to a four section APA railway with a corner module.

Based on my experience, here is a suggestion for a APA On30 (or H0) module standard. The module consist of a APA box; only external modifications being no front panel and side panels removed or with NEM size openings, joining track center 140mm from the external back. Electrical installations according to FREMO (On30 or H0), but exiting via holes in back, at both back sills.

As a base, APA is not intended to mount with FREMO modules; however, if someone designs an undercarriage of IKEA IVAR bookshelf sides, to appropriate height and with a suitable joiner plate, FREMO standards, there is no reason for not joining APA modules with FREMO ones. The Swedish MälarModulMöte (<http://malarmodulmote.com> in Sw) has used IVAR for some years now as a standard module undercarriage. However their On30 module is 500 mm deep, thus the issue.

In order to handle On30 corner modules, the track center for traversing main track between modules has to be maximum 140 mm out from the external back side of APA. 120 or 130 mm would given better curves, but lessens the distance to the back for landscaping to much. Bachmanns, Roco and Athearn On30/H0 engine bodies seems to acceptably traverse corner units with 140 mm track center, therefor this suggested. Track bed, 5 mm high, goes flush out over the external side of the lower side sills. Track resting on the bed and is Pico 0e 16.5 mm as standard. If used together with FREMO modules, possibly a track extender solution is needed.

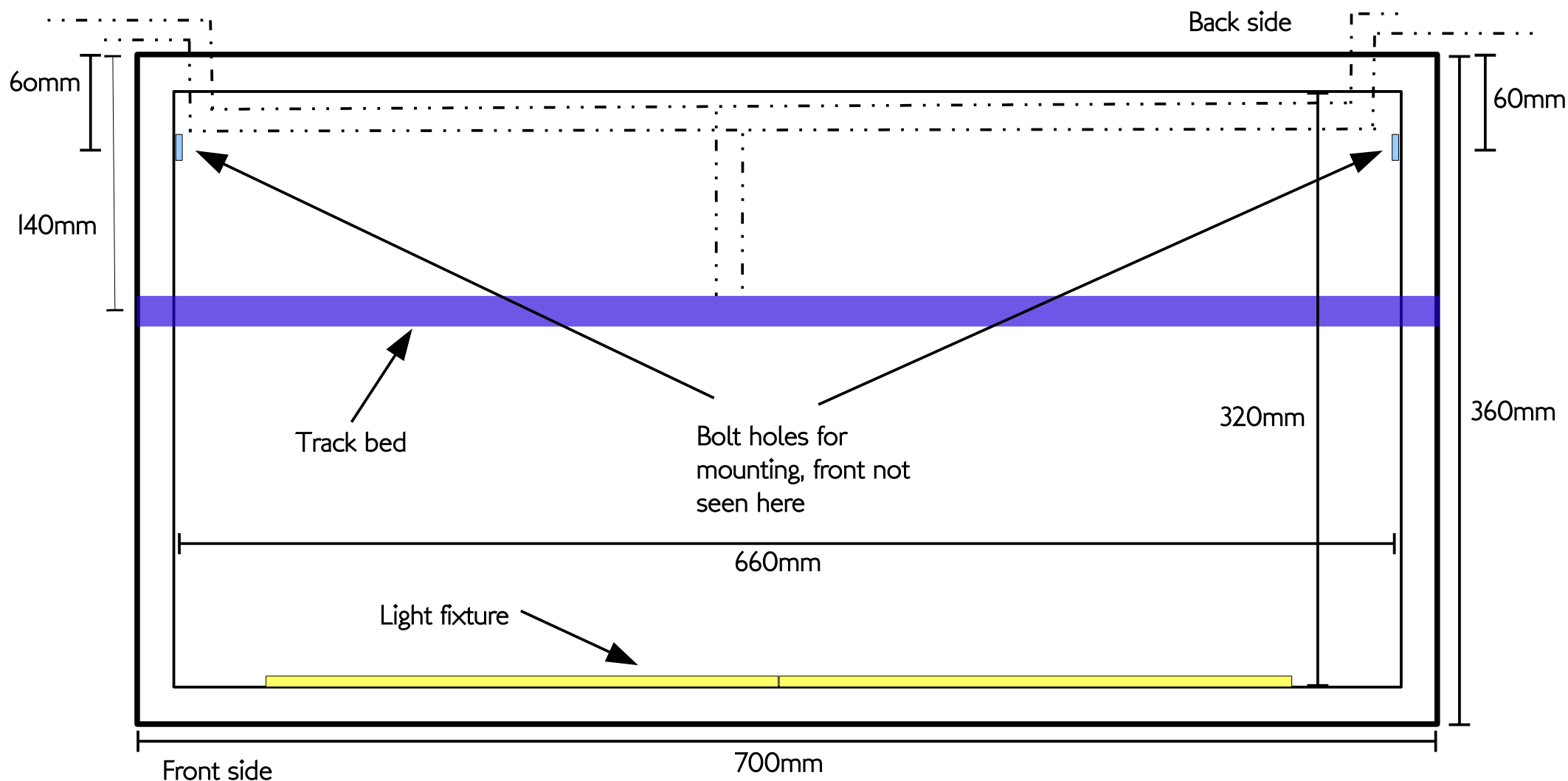
APA units need to be bolted together for stability. Normally resting on a desktop/shelf, with no load to be supported, one bolt in the upper side sill, 60 mm from the external back, 15 mm down and one in the front sill, 60 mm up from supporting base and 25 mm in, would be sufficient. One word of caution though! The wood used in APA is of very poor quality, re-drilling up from with finer dimension needed. If 6-7mm bolts, two expansion re-drills is needed, to avoid fracturing of the sills, top sill most sensitive.

Suggested lightning is IKEA Dioder LED fixtures. Sold with four ramps, joinable, they can be mounted on the backside of the upper front sill, cable mounted along one of the upper side sills, just below lid. With 2 mm acrylic front, we then have a finished module.

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(Drawing Scale 1/3 -Top view)

Dimensions: external: 700 mm x 360 mm internal: 660 mm x 320 mm - Track exchange center: 140 mm from back



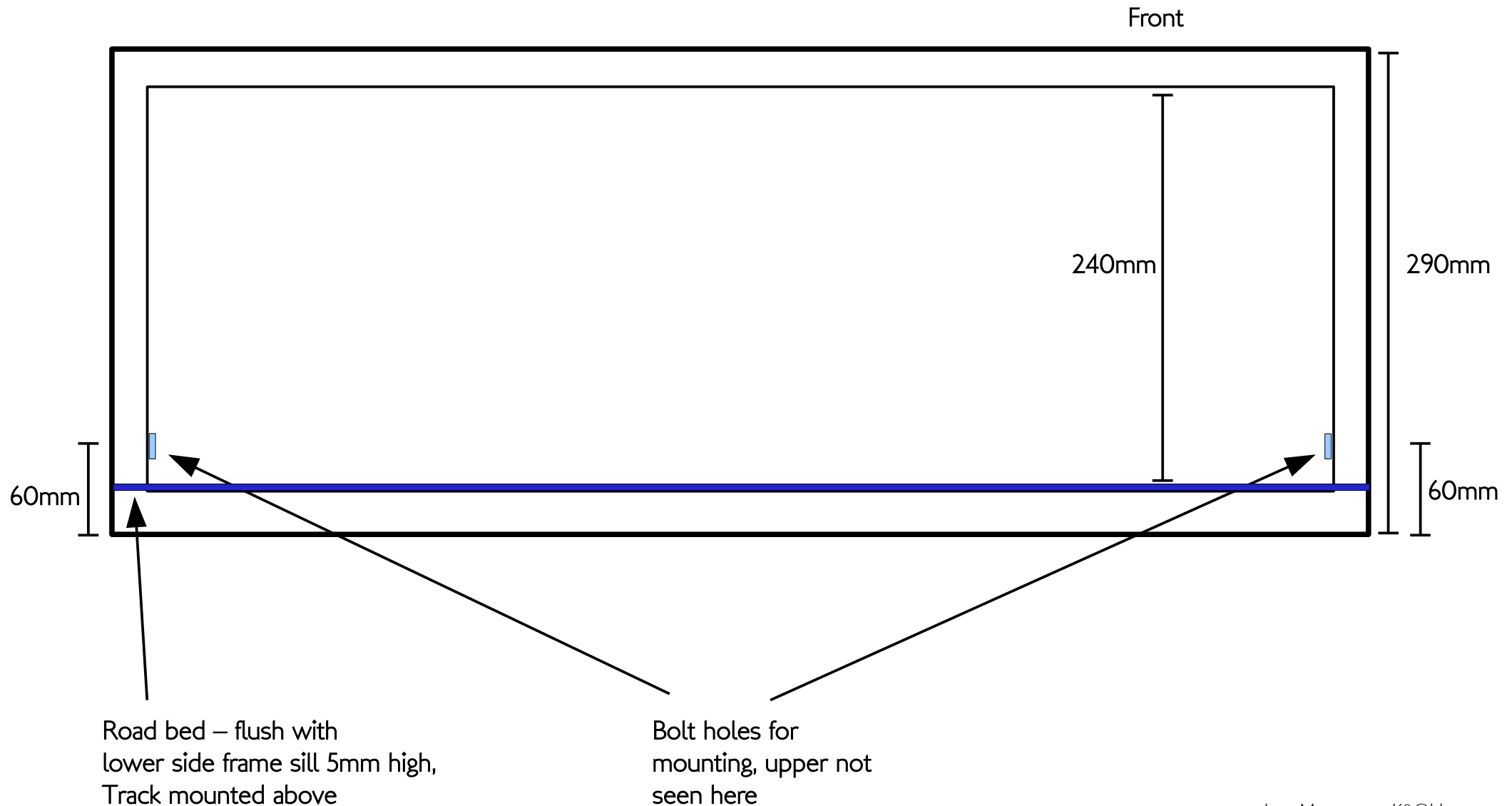
Electrical: Fremo module standard Side opening: NEM/NMRA On30 std or no side Lightning: IKEA Dioder – 2 sections per module



Lars Magnusson, K&OH

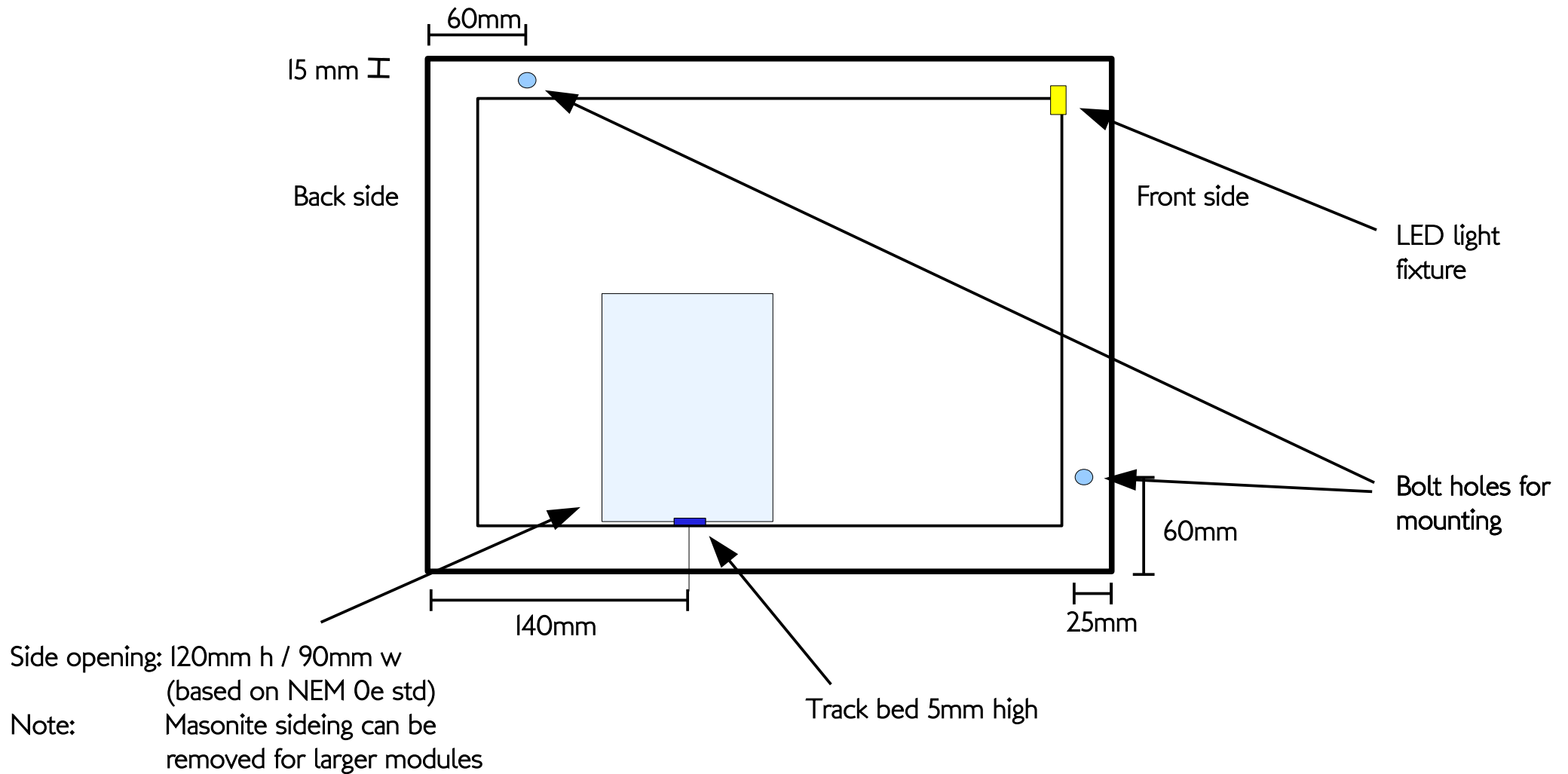
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(Drawing Scale 1/3 – Front view)



# Suggestion - IKEA Apa module for On30 model railroading

(Drawing Scale 1/3 – Side view)



## Suggestion - IKEA Apa module for On30 model railroading - examples A

Double APA module with full opening between two modules



With IKEA Dioder LED ramps



## Suggestion - IKEA Apa module for On30 model railroading - examples B



Full test with IKEA Dioder LED ramps



Second APA module segment lighted

## Suggestion - IKEA Apa module for On30 model railroading - Bolting



Upper, inner sill bolt.

Note:  
Remote sill fractured during drilling, 6 mm drill.



Lower, front sill bolt