

DET Supplemental Document

FB3-1 Front Crush Box

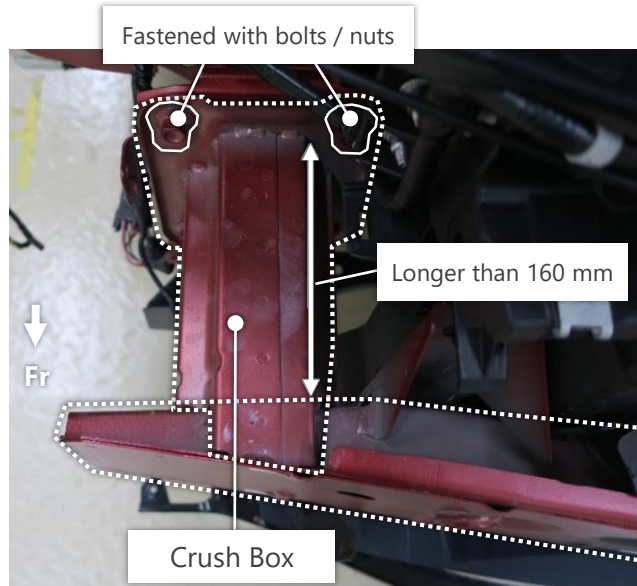
Condition

- Vehicle : All vehicles
- Part and Structure : Front Crush Box



Criteria

The Front Crush Box should be fastened with bolts or nuts, and have the length longer than 160 mm.



1. Fastening of Front Crush Box
2. Length of Front Crush Box

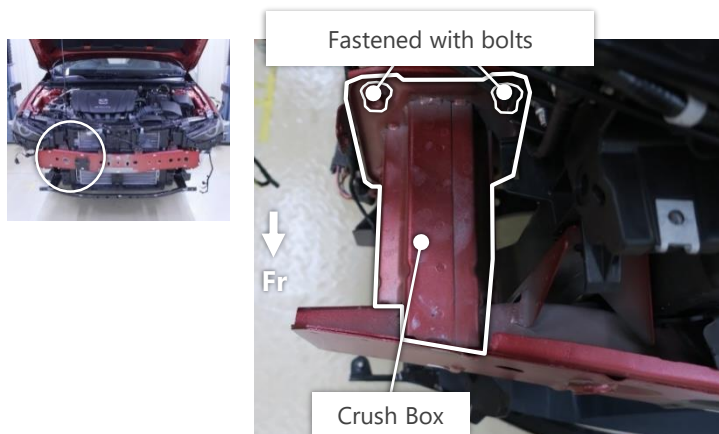
Reason

When the Front Crush Box is fastened to the Front Side Member with bolts or nuts to facilitate replacing the Crush Box after a collision, man-hours for the repair work can be reduced.

The Crush Box with 160 mm or longer length provides sufficient energy absorption capability and helps prevent damage from spreading to the Front Side Member in the Structure Test.

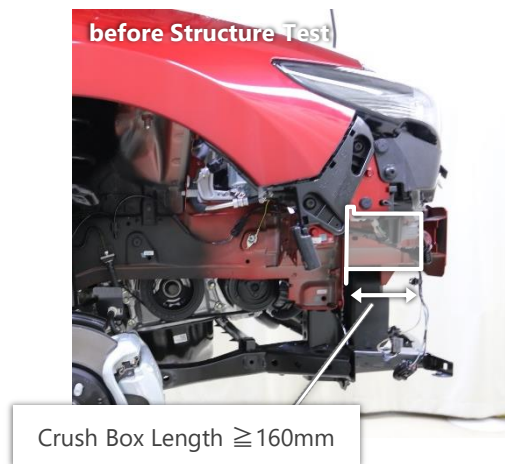
1. Good example of a fastening of Crush Box

Crush Box was fastened with only bolts, which makes easy to replace it after a collision.

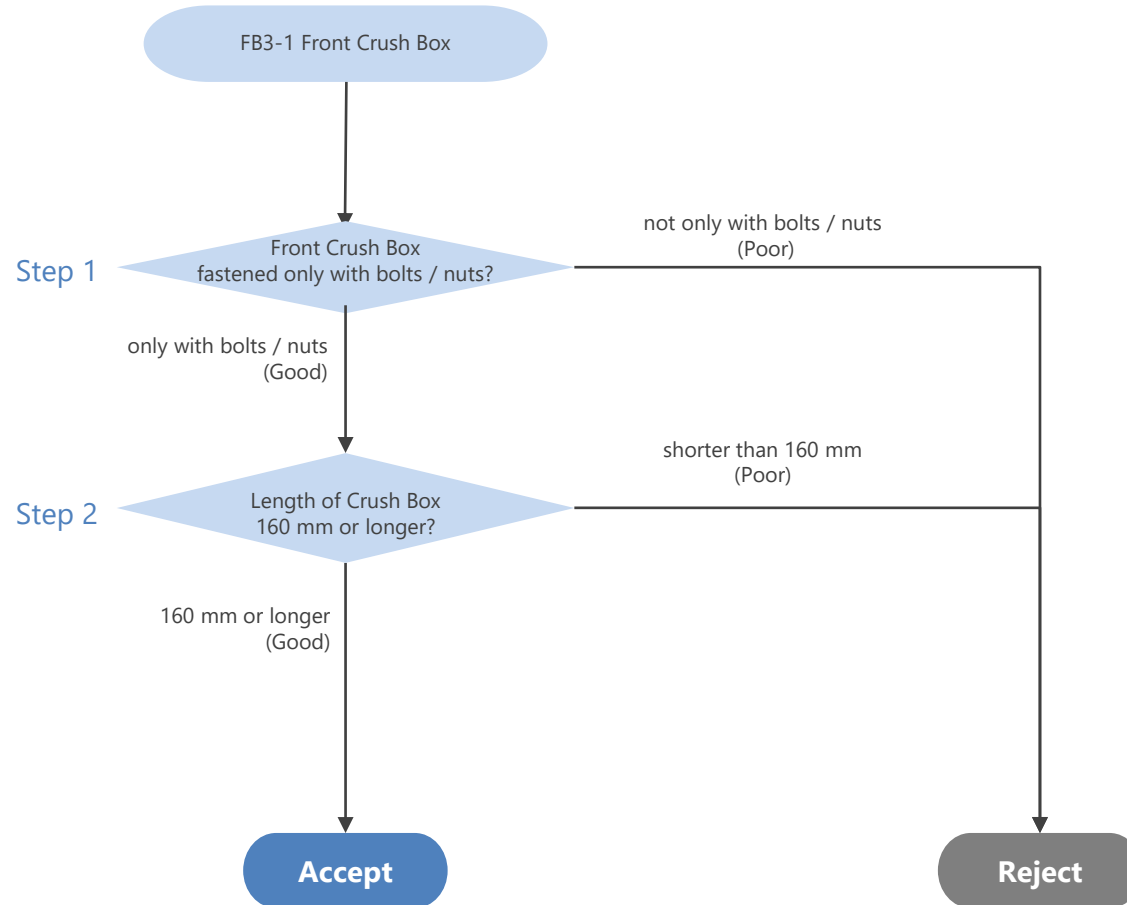


2. Good example of length of Crush Box

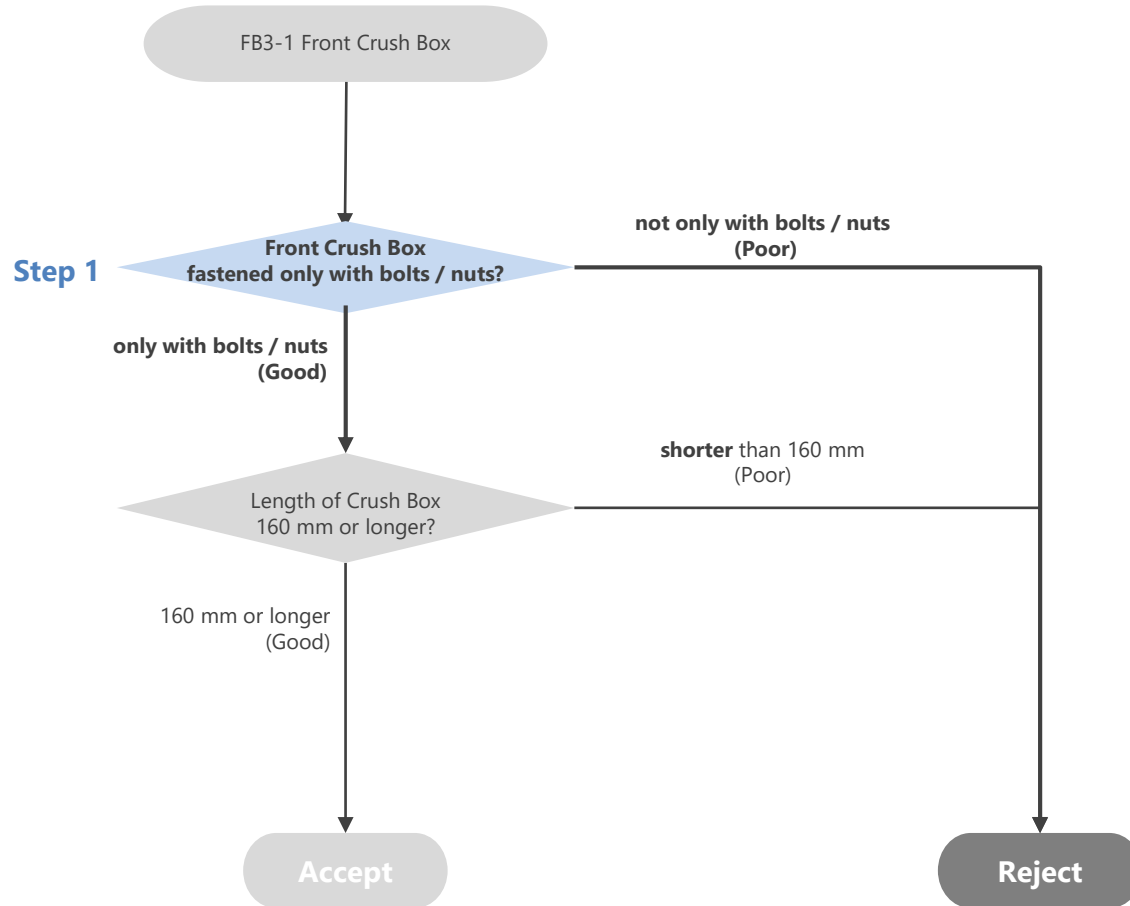
Crush Box was longer than 160 mm and prevented damage from spreading to Front Side Member on Structure Test



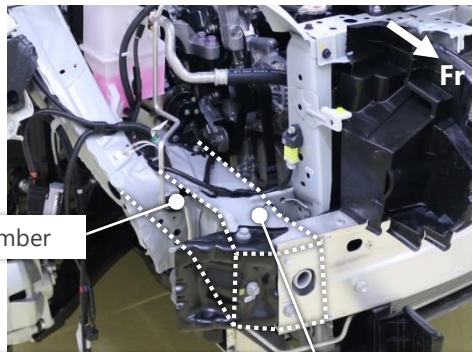
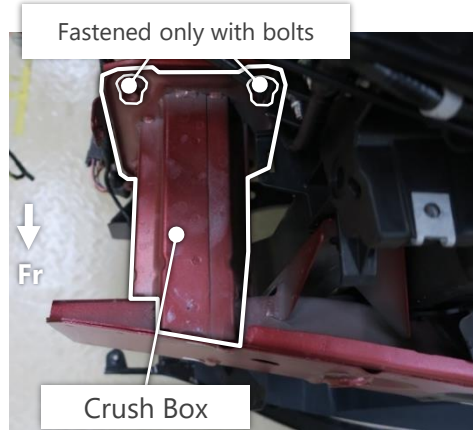
Check Flow



Check Flow – Step 1



Check – Step 1



There is no Crush Box fastened with bolts / nuts

Check if the Front Crush Box is fastened only with bolts / nuts.

【Determination】

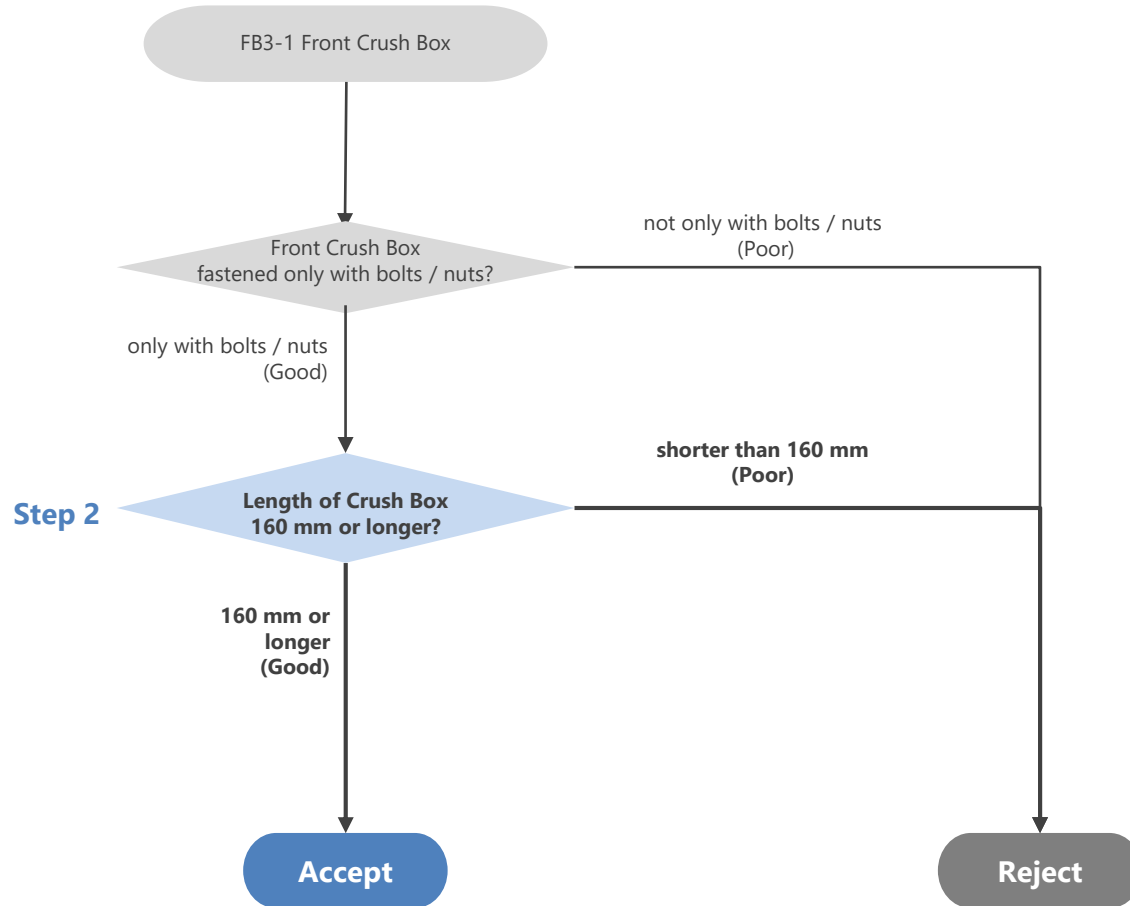
Good

- When the Front Crush Box is fastened only with bolts / nuts, the structure facilitates replacing the Crush Box and is determined as Good.

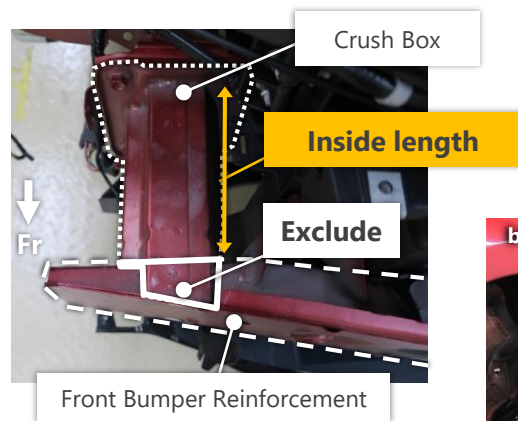
Poor

- When the Front Crush Box is not fastened only with bolts / nuts, the structure requires more work to replace the Crush Box and is determined as Poor and **Reject**

Check Flow – Step 2

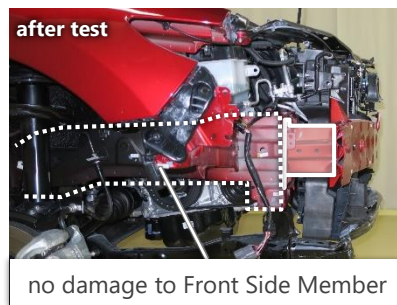
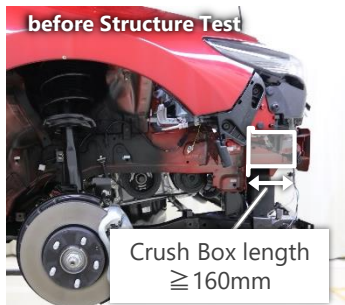


Check – Step 2



Check if the inside length of the Crush Box is 160mm or longer.

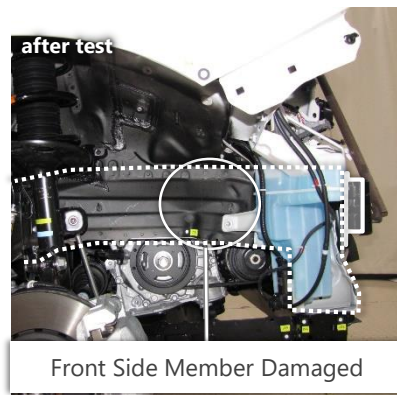
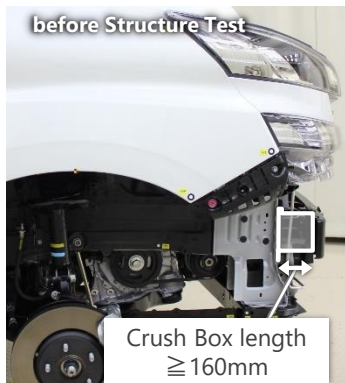
- ☞ Exclude the overlap part of the Crush Box and the Front Bumper Reinforcement from the length.



【Determination】

Good

- ☞ When the checked length is 160 mm or longer, it helps prevent damage to the Side Member and is determined as Good and **Accept**



Poor

- ☞ When the length is shorter than 160 mm, it is determined as Poor and **Reject**