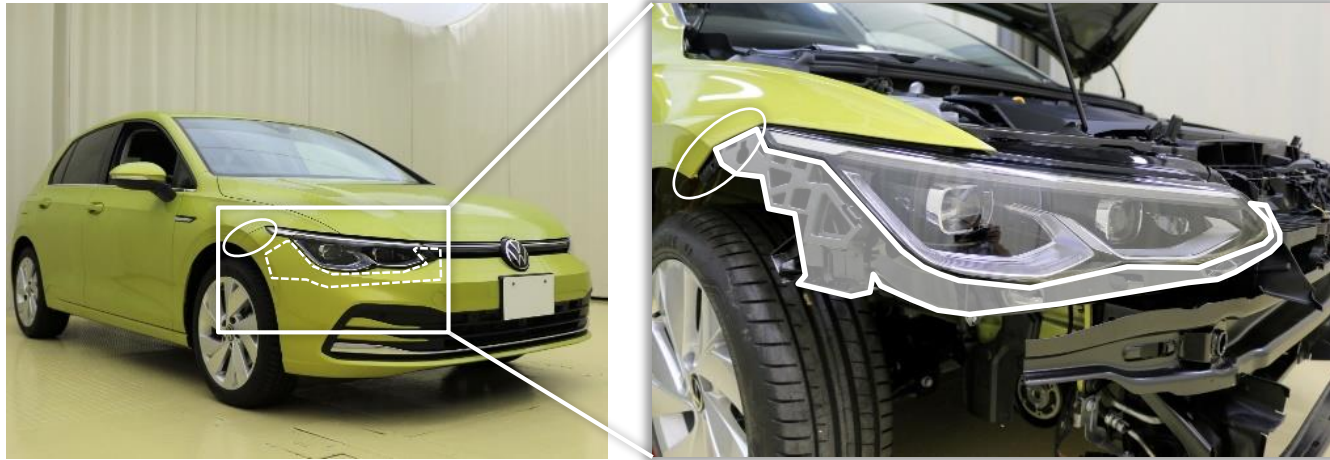


DET Supplemental Document

FB1-1 Front Bumper Cover

Condition

- Vehicle : All vehicles
- Part and Structure : Fastening between Bumper Cover and peripheral expensive parts
(e.g. Head lamp or Front Fender)



Criteria

The Front Bumper Cover (including Radiator Grill) mount should be easily detached in a collision to prevent damage from spreading to the Headlamp, fender, and other expensive peripheral parts.



1. Attachment between Front Bumper Cover (including Radiator Grill) and Front Fender

2. Attachment between Front Bumper Cover (including Radiator Grill) and Head Lamp

Reason

When the Front Bumper Cover (including Radiator Grill) mount is easily detached, damage is less likely to spread to the Headlamp, Fender, and other expensive peripheral parts.

1 . Good example of fastening between Front Bumper Cover and Fender

The mount of the Bumper Cover was detached and the Fender was not damaged, because the Cover was fixed to the Fender without any fastener*.

* Bolts, nuts, screws or Clips



Mount was detached without damaging Front Fender

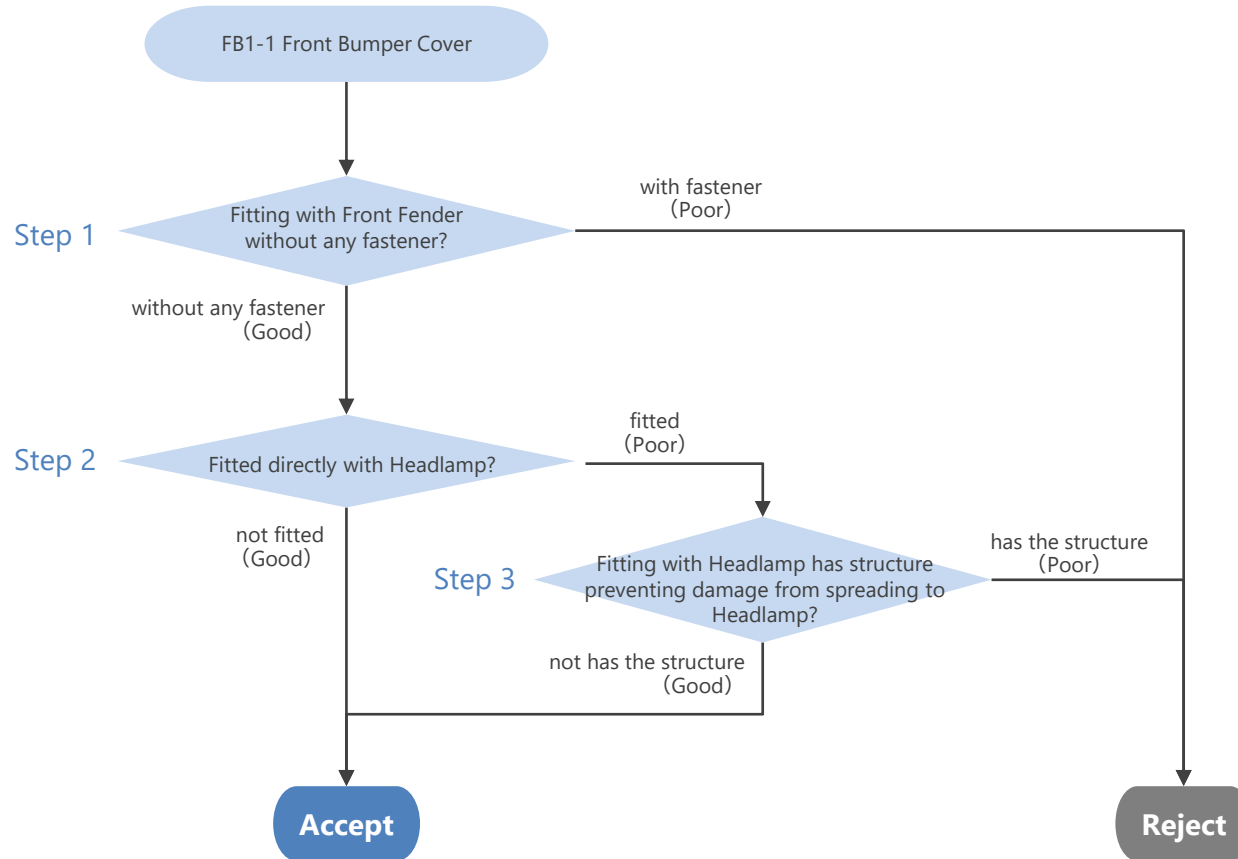
2 . Example of no fastening between Front Bumper Cover and Headlamp

The Headlamp was not damaged in the Bumper test, because the Front Bumper Cover was not fixed to the Headlamp.

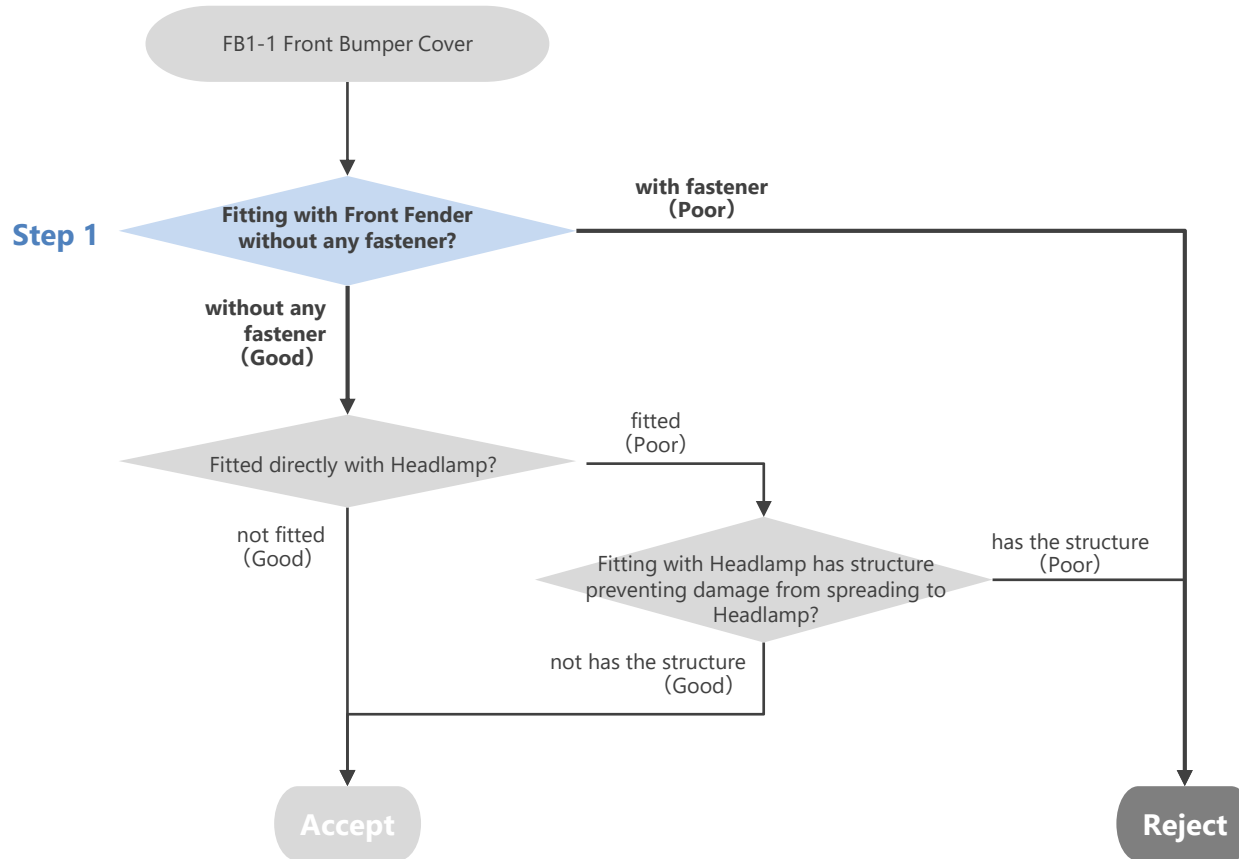


No damage to Headlamp

Check Flow

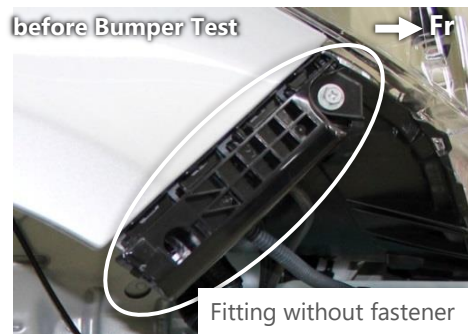


Check Flow – Step 1



Check – Step 1-1

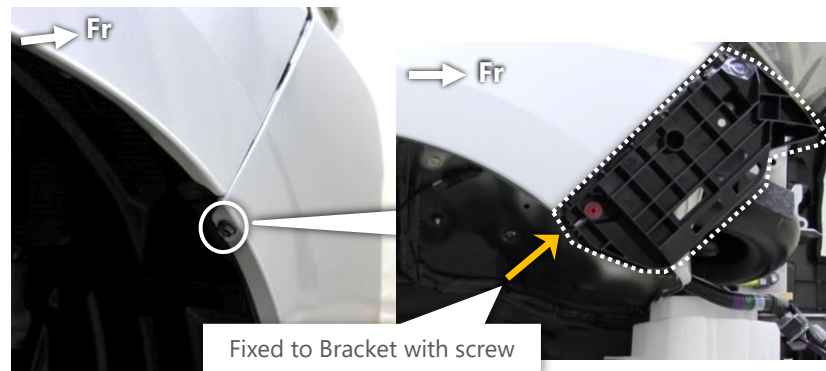
Check if fitting between the Bumper Cover and Fender is easily detached in a collision or not.



【Determination】

Good

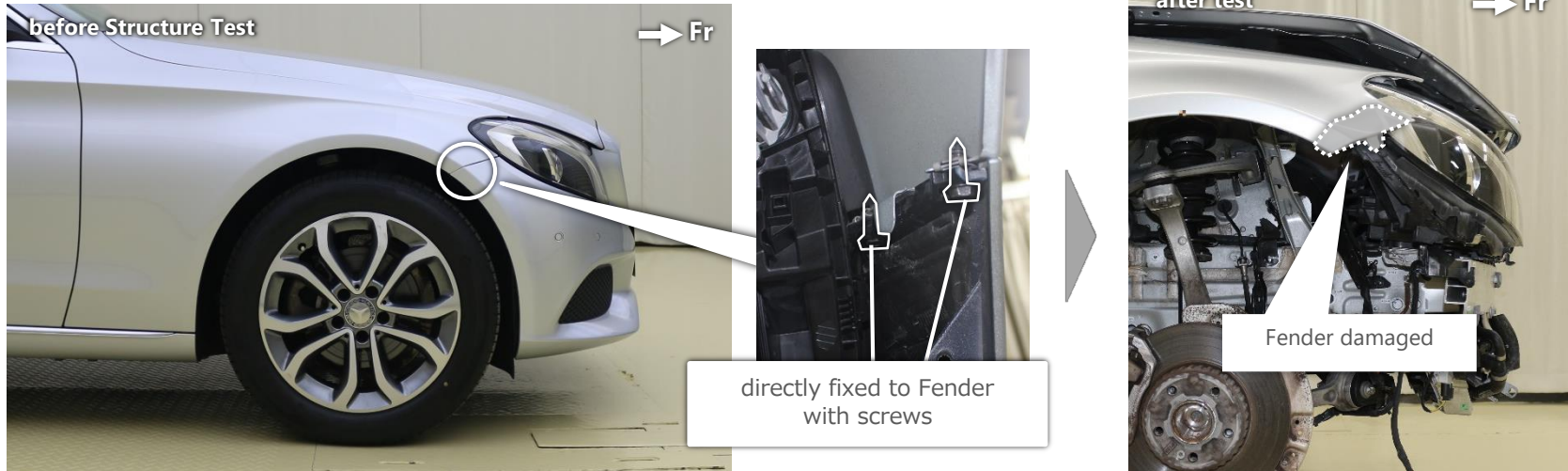
- When the Bumper Cover and the Fender are just fitted together without any fastener, the fitting looses easily and is determined as Good.
- When the Bumper Cover is fixed with fasteners to Brackets, damage is less likely to spread to the Fender and also determined as Good.



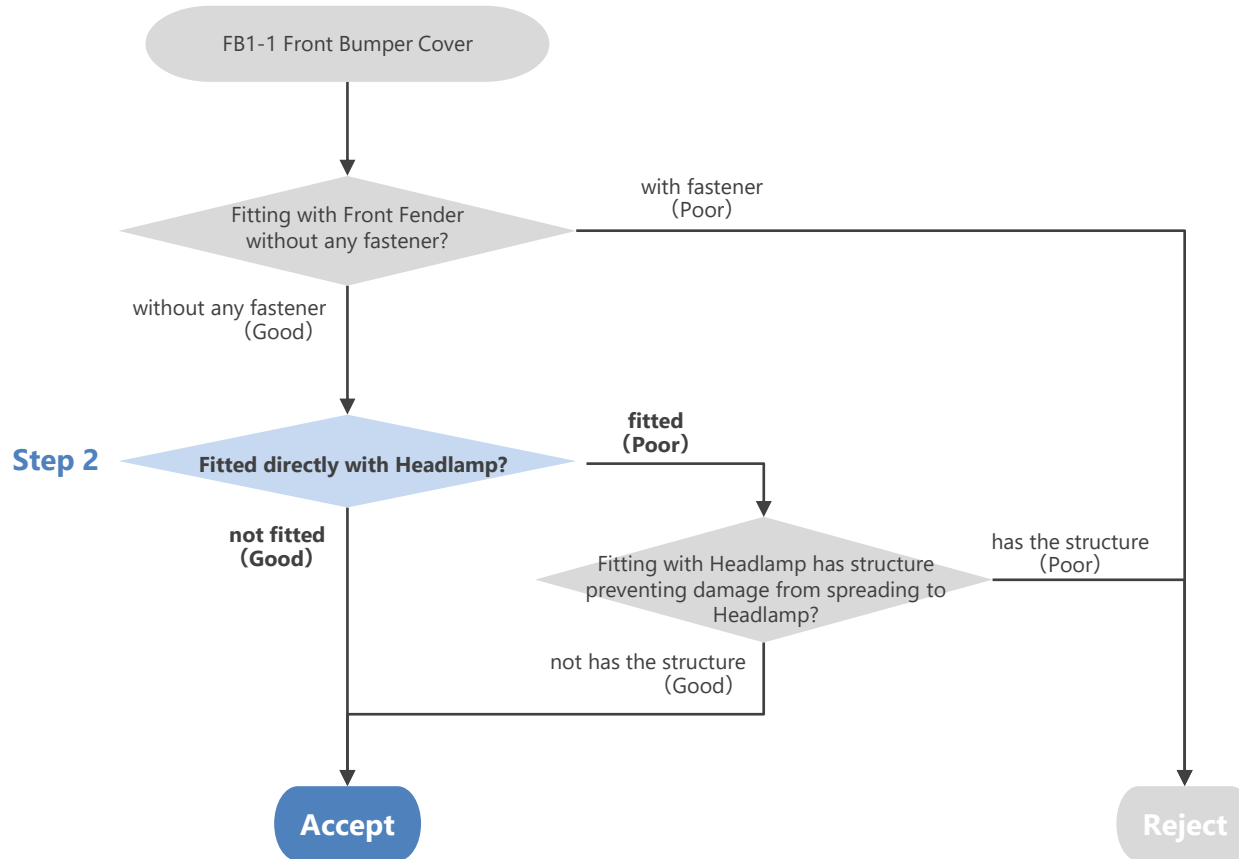
Check – Step 1-2

Poor

- When the Bumper Cover and the Fender are fixed directly with fasteners such as screws or clips, the fitting does not loose easily and is determined as Poor, results in **Reject**

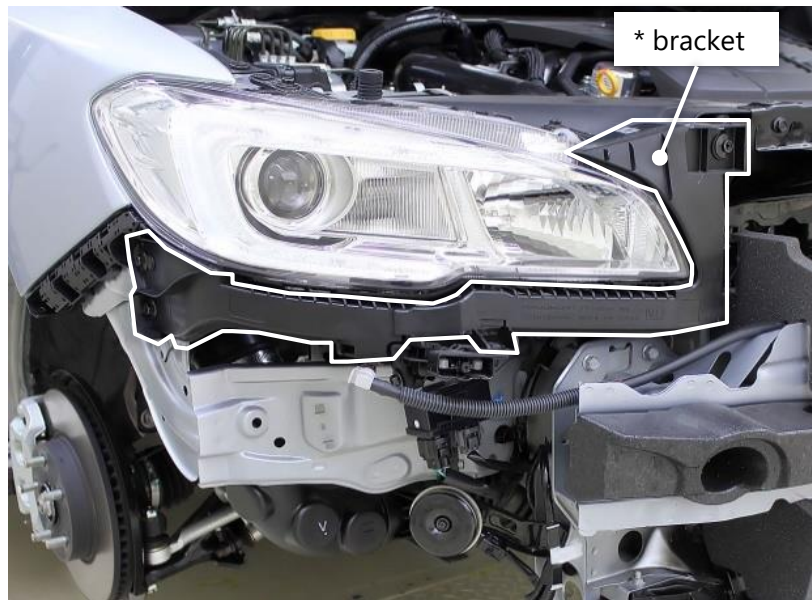


Check Flow – Step 2



Check – Step 2

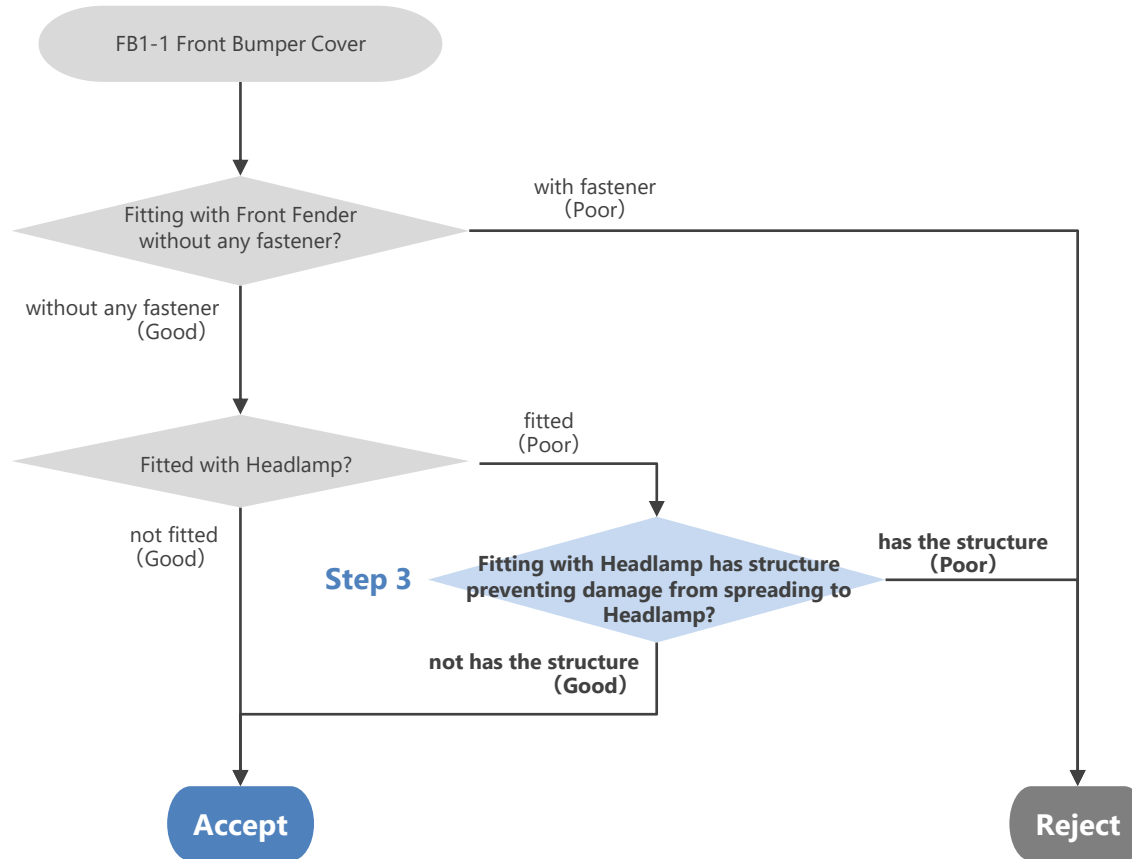
Check if the Bumper Cover (including the Radiator Grill) is not directly attached to the Headlamp.



【Determination】

- ☞ When the Bumper Cover is not directly attached to the Headlamp, damage is less likely to spread to the Headlamp. The structure is determined as Good and results in **Accept**
- ☞ When the Cover is not directly, but attached to the Headlamp through a bracket*, damage is likely to spread to the Headlamp. This is determined as Poor.
- ☞ When the Cover is attached to a bracket or a mount* which is fixed to the body structure, not to the Headlamp, damage is less likely to spread to the Headlamp. This is determined as Good and results in **Accept**

Check Flow – Step 3

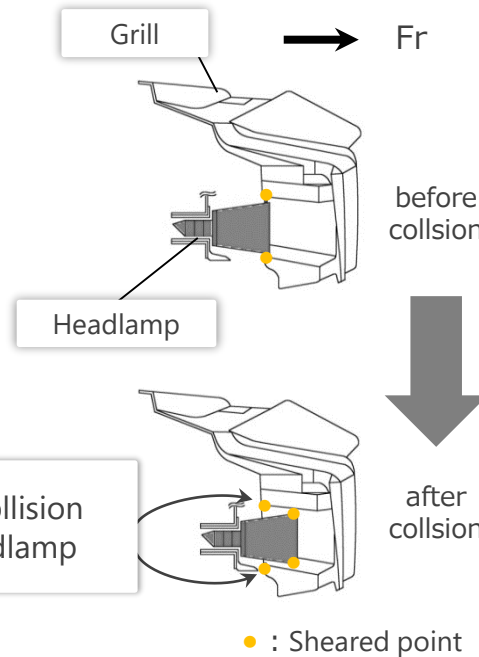


Check – Step 3

Check if the mating section of the Bumper Cover (including the Radiator Grill) to the Headlamp has a structure preventing damage to the Headlamp or not.



Mating section shears in a collision and prevent damage to Headlamp



【Determination】

- ☞ If the Bumper Cover (including the Radiator Grill) is directly attached to the Headlamp, when it has a structure which prevents damage to the Headlamp, it is determined as Good and results in **Accept**
- ☞ When the Cover does not have the structure described above, it is determined as Poor and **Reject**