# February 2014 Technical Service

This Service Information bulletin supersedes SI B32 02 01 dated July 2001.

NEW designates changes to this revision

#### **SUBJECT**

### **Replacement of Steering Gear Due to Accident Damage**

#### **MODEL**

All

#### **SITUATION**

Impacts due to accidents or similar driving conditions can cause damage to steering boxes or racks. It may be extremely difficult to diagnose internal damage to steering boxes or racks which otherwise appear undamaged externally.

A thorough internal check of steering gears is generally not economically feasible. However, damage to other related components can be taken into consideration when deciding whether a steering gear must be replaced.

#### **PROCEDURE**

The steering gear does **NOT** have to be replaced if:

- There is no visible damage to front axle parts such as spring struts, hubs or spindles, control arms or wishbones, thrust or tension rods or stabilizers performing a locating function, steering drop arms or Pitman arms, track rods or drag links, tie rods, the front axle subframe, the steering column, and attachment points for suspension components to the body.
- There is no binding or increase in turning effort when operating the steering gear from lock to lock with the engine off.
- After the impact, the wheel alignment can still be adjusted within specified tolerances using normal adjustment procedures.

The steering gear **MUST** be replaced if:

- There is visible damage to the steering gear, including blackening or discoloration of the housing from fire damage.
  - New Electric steering gear (EPS) version: Examine the control unit with all plug connections for damage and hairline cracks.
- There is any permanent deformation or cracks on:

Steering gear mounts

Front axle subframe

Steering drop arms or Pitman arms

Spring struts

Spindles or hubs

Steering column

Control arms or wishbones (except damage caused by improper towing or tie-downs)

Thrust or tension rods or stabilizers performing a locating function (except damage caused by improper towing or tie-downs)

Track rods or drag links and tie rods (except damage caused by improper towing or tie-downs)

- The steering column **MUST** be replaced if visibly damaged, deformed or broken.
- F2x, F3x: If there is no visible damage, check the steering column for a sheared-off crash rivet:
  - 1. Open the steering column lock.
  - 2. Pull the steering wheel out towards the driver (towards the body) until the physical limit is reached, but do not use excessive force.
  - 3. Push the steering wheel towards the engine compartment (approx. 20-30 mm away from the body) into the comfort position and lock.

If there is no end stop when pulling out the steering column or the steering column shroud gaiter is under tension, the crash rivet is sheared off!

Replace the steering column.

If a recommended replacement with the criteria described above is refused by the customer or insurance company, this should be noted in the repair order and signed by the refusing party.

## **NEW** WARRANTY INFORMATION

Not applicable.

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