

Min/max tolerance sample catalogue for paintwork and corrosion damage

All

Situation: Min/max tolerance samples are available to enable improved pinpointing of paint and corrosion damage. They are a supplement to the BMW Paintwork publication announced in Service Information [41 01 08 \(452\)](#) and published in October 2008.

Vehicles that are older than three years after the first registration date may only be repaired by replacing components if the damage exceeds a defined extent (see min/max tolerance samples). With immediate effect, certain paint damage patterns attributed to incipient corrosion may only be repaired by means of spot repairs as small as possible.

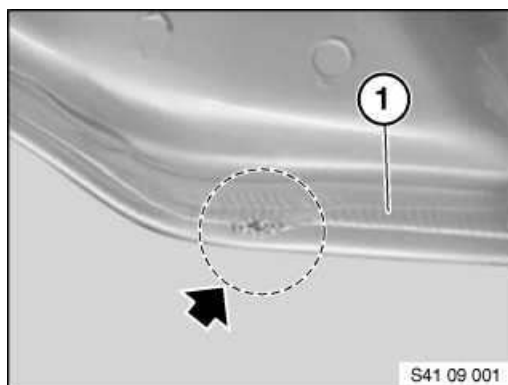
There are currently five max/min tolerance samples:

- **Paintwork damage with min/max tolerance sample A** (critical damage pattern)
- **Paintwork damage with min/max tolerance sample B** (minor damage pattern)
- **Paintwork damage with min/max tolerance sample C** (scrape marks)
- **Paint damage with tolerance sample D** (rubber grommets)
- **Paint damage with min/max tolerance sample E** (vehicle underbody)

All customer complaints are to be classified based on these additional min/max tolerance samples.

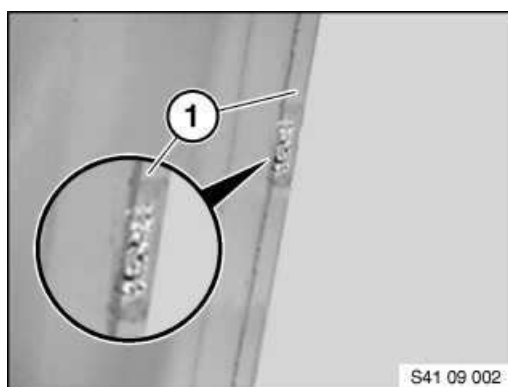
1. Min/max tolerance sample A (critical paintwork damage)

General appearance: Rust is visible without scratching the surface.



Sample A1:

Visible rusting on fold and its seal (1).



Sample A2:

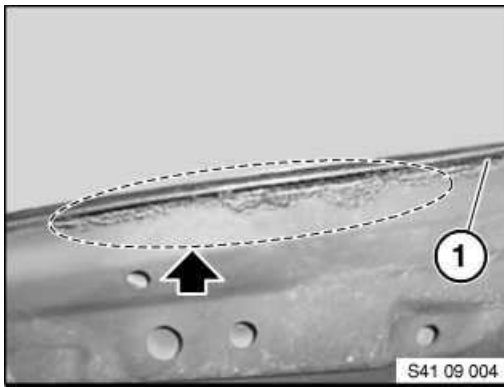
Bubbling on outside (1) of fold seal.

Note:

Bubbling between fold seal and outer edge. The fold seal covers an approx. 5 mm wide strip at the edge of the component.

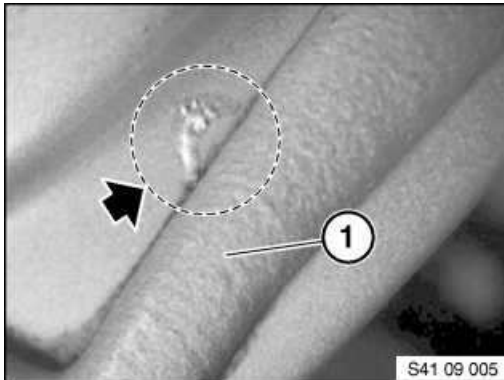
Sample A3:

Bubbling on the inside of the fold seal (1) is more extensive than the width.



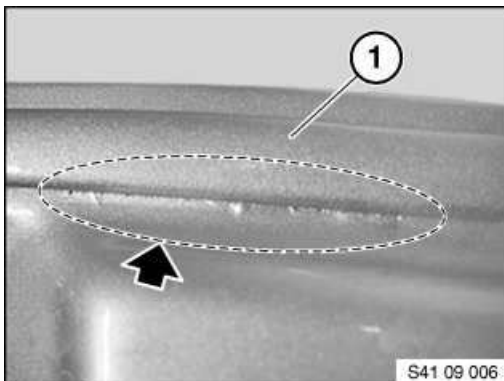
2. Min/max tolerance sample B (minor paintwork damage)

General appearance: Rust is **NOT** visible without scratching the surface.



Sample B1:

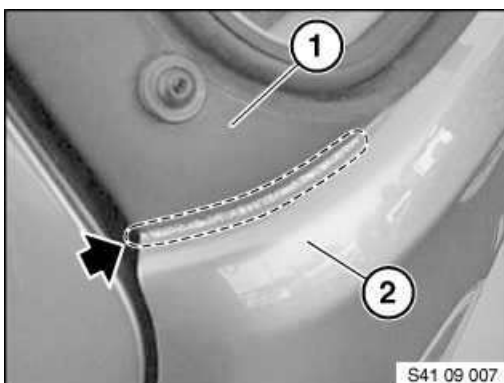
Bubbling on the inside of the fold seal (1) is less extensive than the width. Lengthwise distribution is less than the width of the fold seal (1).



Sample B2:

Bubbling on the inside of the fold seal (1) is less extensive than the width. Lengthwise distribution is greater than the width of the fold seal (1).

3. Min/max tolerance sample C (scrape marks)

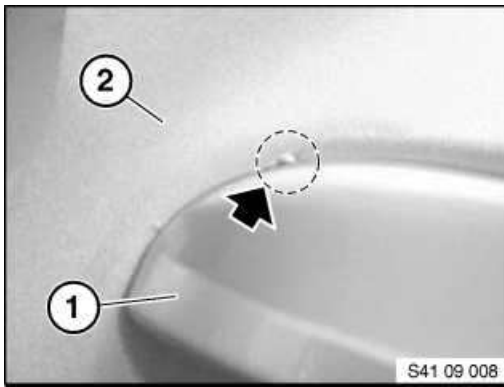


Sample C1:

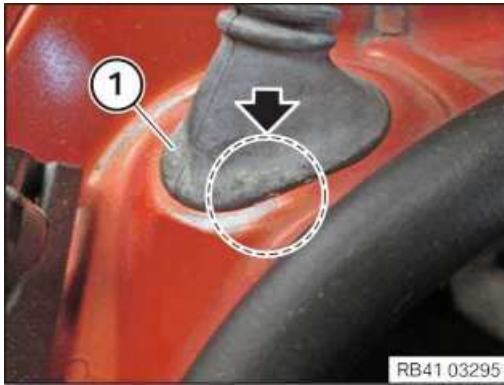
Scrape marks on paint surface of the tailgate (2) by plastic trim (1) (only Touring).

Sample C2:

Chafe marks on paint surface caused by tailgate handle strip (1) on tailgate (2).



3. Tolerance sample D (rubber grommets)



Formation of blisters is not visible without lifting the rubber grommet (1).

3. Min/max tolerance sample E (vehicle underbody)



Visible red rust formation originating from an edge or a spot-weld.

Procedure: The damage patterns are now differentiated based on min/max tolerance samples. The following extended warranty applies:

<u>Not for damage caused by customer</u>	<u>Period in years</u> <u>First registration after 1.1.2004</u>	<u>Selection of the repair method</u>
<u>Min/max tolerance sample A</u>	12	Component replacement if feasible in terms of time
<u>Min/max tolerance sample B</u>	3	Component replacement
<u>Min/max tolerance sample B</u>	from 3	<u>NO part exchange permitted. The approval regulations of the local market must be observed at all times.</u>
<u>Min/max tolerance sample C</u>	12	Paint

<u>Tolerance sample</u> <u>D</u>	12	Paint
<u>Min/max tolerance</u> <u>sample E</u>	12	Seal and preserve.

The paint structure must be built up as specified in the ColorSystem painting handbook.

Attention!

The repair is only carried out in justified case of customer complaint.

In the case of rust damage and paint damage, all mounted parts must be retained wherever possible and remounted as part of the repair procedure.

In contentious cases, e.g. repeated repairs, the advise of the respective Warranty department should be sought in order to clarify the procedure.

Dent repairs without damaging paintwork

All

Situation: Light dents have previously only been repaired through conventional means such as Multispot and filling followed by repainting.

However, methods of rectifying parking and hailstone damage that do not damage the paintwork are becoming increasingly common. Vehicle insurers are fully supportive and endorse this approach.

This procedure involves pressing out damage from the inside of sheet metal panels using levers followed by polishing. The total outlay is much lower than for conventional dent repairs with subsequent repair painting. It is to be noted here that some areas of damage cannot be reached on account of reinforced or bonded body components. For safety reasons, no additional holes may be drilled to improve accessibility.

The size of the dent should not exceed a diameter of 80 mm.

This procedure can also be used during general workshop repair processes, such as:

- Preparing for painting (reduction in filling work)
- Rectifying any damage following repair painting.

Based on this background as well as environmental aspects and the positive effect on insurance coverage classification, this method of repairing dents without paintwork damage is approved for BMW vehicles. This approval only applies to dents that do not have visible paintwork cracks.

Procedure: Repairing dents without damaging the paintwork requires continuous practice and a high degree of skill. In order to cater for the relevant situation at all contractual partners, two application methods for optimum use are offered.

1. In the same way as professional body and paintwork shops are already used, it is also possible in this case to commission qualified contractors for the purpose of conducting dent repairs without paintwork damage.
2. Purchase of a BMW pressing-out tool set for dent repairs.

The form and materials of this set have been carefully selected for BMW vehicles. It consists of a standard set (for approx. 80 % of the outer body skin that can be reached) and an extension set (for the remaining 20 %).

Training is recommended so that the tool set can be used effectively. This training is offered by external companies and can be conducted locally (e.g. for Germany the company Ur-Form).

See Service Information 5 04 98 (328).

Note:

Make sure that the training provider does not conduct training under the prerequisite of purchasing his particular set of pressing-out tools.

New BMW paint brochure

All

Presentation of BMW paint brochure:

The existing BMW paint brochure has been thoroughly revised and in its new form provides good reference for assessing all kinds of paint and corrosion damage.

The examples and detailed descriptions contained in the brochure are intended to find a standard language for identifying paint and corrosion damage. Unambiguous descriptions of damage mean that misinterpretations can be largely ruled out when assessing a possible warranty claim. Communication between the customer and the authorised BMW dealer during assessment on the vehicle is also made greatly easier.

If for example the following damage is unambiguously identified on the paint surface, this will always be considered to be the responsibility of the customer, and warranty will be ruled out:

- Mechanical influences on the paint surface (e.g. scratches)
- Damage to the paint surface caused by chemical or biological influences (e.g. animal droppings)

The new BMW paint brochure complements the BMW paint handbook when eliminating paint and corrosion damage. This means that the repair procedures described in the BMW paint handbook are adapted unambiguously and purposefully to the fault pattern.

Subsequent orders for BMW paint brochure:

The BMW paint brochure can be ordered via the usual parts-related channel under the BMW parts number 01 29 2 148 332.

New repair methods "Gluing / Riveting" on steel bodies

BMW/MINI

Situation: Advance technical developments in the field of adhesives and equipment technology have made modified repair methods possible. This procedure has been tested and approved following exhaustive endurance runs and corrosion tests in the Development division.

Similar to the procedure for the tail panel on the F01/F02, the repair methods "welding/soldering" will change to "gluing/riveting" on various outer skin and structural components of steel bodies from the launch of the E89 and R57. This procedure has already been introduced for repair work on the reduced-weight aluminium front end (GRAV) of the E60.

The repairs can be performed by all workshops that have participated in a GRAV or the current bonding and riveting training, in combination with the training video.

Another positive point of this method is the significantly improved corrosion protection resulting from the wide-area bonding of the spare part coating (KTL).

Procedure: Essentially, the following components are affected:

- Rear side wall
- Tail panel
- Boot floor
- Roof outer skin
- engine carrier
- support carrier

Model series affected:

- MINI (R55, R56, R57)
- BMW 1 Series (as of E8x)
- 3 Series (as of E9x)
- 5 Series (as of E60)
- X1 (E84)
- X5 (E70)
- X6 (E71)
- Z4 (E89)
- 7 Series (as of F01)

And all future series.

Necessary workshop equipment:

- Punch riveting tool
- Blind riveting tongs
- Cartridge gun for body glue
- Universal collet (for roof ducts)
- Infrared lamp

For more information on the required tools, see Service Information.

Parts required:

The new parts and consumables required for the respective scope of repair work are listed in the Electronic Parts Catalogue (EPC).

In addition, vehicle-specific service repair packages are also offered. Here, the vehicle identification number is to be entered in KSD2, the corresponding "Packages" button selected and the required job item selected in main group 41.

Repair instructions:

The repair instructions have been revised to take account of the new repair method:

To differentiate the individual repair methods, the repair stage is inserted in the repair instructions.

- Repair stage 1: All repairs that only provide for replacement of screwed/bolted components and planishing operations.
- Repair stage 2: Repairs that are carried out by bonding and riveting without the use of a straightening bench.
- Repair stage 3: Repairs that are carried out by bonding and riveting with the use of a straightening bench or welding.

Training video for bonding and riveting:

The new methods, for example "punch riveting", have been described on a training video that will be distributed to National Sales Companies.

Please make sure the training video is made available to the staff who will be performing this work and, if you do not perform body repair in your own workshop, to the staff of your specialist body workshop.

The BMW paint brochure can be ordered via the usual parts-related channel under the BMW parts number 01 69 0 037 577.

Time allowances:

Time allowances (flat rates) have been revised to take account of the new repair methods and shall apply retrospectively.

Repair of corrosion damage

All

Situation: A paint brochure is available for the evaluation and repair of body components relating to corrosion damage.

It contains examples for the definition of paint and corrosion damage and provides information on remedies and repairs. Details on contents and distribution were published in the [Service Information \(bulletin\) 41 01 08 \(452\)](#).

The procedure for chafe marks (e. g. tailgate repair) is described in detail in the vehicle-specific Service Information (bulletin).

Chafe mark on a painted surface generally are not considered to justify a part replacement.

Procedure: **Important!**

Repair of corrosion damage only if there is a specific customer complaint!

To the extent that the design allows, all add-on parts must be retained and converted.

Always adhere to the following procedure when dealing with corrosion damage:

1. Establish the fault pattern of the damaged area with the aid of the new paint brochure and use this as a basis to determine the repair measures.
2. Remove the partial area of the body as specified in the repair instructions.
3. Repair the partial area affected by corrosion in accordance with the repair instructions and the BMW paint manual.
4. Reassemble the vehicle using the removed add-on parts.

Note:

Only the following repairs of the body components may be invoiced.

- Replacement of the corroded body component (only in case of rust damage without partial repair)
- Paint
- Conversion of add-on parts
- Cavity preservation

31 01 12 (833)

Visible corrosion on vehicle add-on parts

Situation: Since the market introduction of the E65/66 the engine compartment and underbody preservation has successively been dropped from all series for environmental protection reasons. This may result in visible corrosion of machined surfaces such as, for example, on chassis/suspension components, machined screwing/bolting points, screw connections, or on surfaces such as, for example, the joints and drive shafts!

To prevent or re-treat this surface corrosion, the dealer organisation should use the corrosion protection with BMW part number 83 19 2 317 997.

Vehicles concerned: All BMW, MINI series

Procedure: Apply a thin coating of corrosion inhibitor (using only a brush) to the affected areas.

Warning!

Risk of fire!

Do not apply any corrosion inhibitor to the engine or the exhaust system!