

The individual vehicle

When you ordered your BMW, you chose various items of equipment. This Owner's Manual describes the entire array of options and equipment available with a specific BMW model.

Please bear in mind that the manual may contain information on accessories and equipment that you have not specified for your own vehicle. Sections describing options and special equipment are marked by asterisks * to assist you in identifying possible differences between the descriptions in this manual and your own vehicle's equipment.

If equipment in your BMW is not described in this Owner's Manual, please refer to the accompanying Supplementary Owner's Manuals.

Editorial notice

BMW pursues a policy of continuous, ongoing development that is conceived to ensure that our vehicles continue to embody the highest quality and safety standards combined with advanced, state-of-the-art technology. For this reason, it is possible in exceptional cases that features described in this Owner's Manual could differ from those on your vehicle.

For your own safety

Maintenance and repair



Advanced technology, e.g. the use of modern materials and powerful electronics, requires specially adapted maintenance and repair methods. You should therefore have the corresponding work on your vehicle performed only by your BMW center or at a workshop that works according to BMW repair procedures with correspondingly trained personnel. If this work is not carried out properly, there is a danger of subsequent damage and related safety hazards. ❗

Parts and accessories



For your own safety, use genuine parts and accessories approved by BMW.

When you purchase accessories tested and approved by BMW and Original BMW Parts, you simultaneously acquire the assurance that they have been thoroughly tested by BMW to ensure optimum performance when installed on your vehicle.

BMW warrants these parts to be free from defects in material and workmanship.

BMW will not accept any liability for damage resulting from installation of parts and accessories not approved by BMW.

BMW cannot test every product made by other manufacturers to verify if it can be used on a BMW safely and without risk to either the vehicle, its operation, or its occupants.

Original BMW Parts, BMW Accessories, and other products approved by BMW, together with professional advice on using these items, are available from all BMW centers.

Installation and operation of non-BMW approved accessories such as alarms, radios, amplifiers, radar detectors, wheels, suspension components, brake dust shields, telephones, including operation of any mobile phone from within the vehicle without using an externally mounted antenna, or transceiver equipment, for instance, CBs, walkie-talkies, ham radio or similar accessories, may cause extensive damage

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Helming



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web the equation below is the final net ionic equation after elimination of the spectator ions which yields water $\text{H}^+ + \text{OH}^- \rightarrow \text{H}_2\text{O}$ the spectator ions in KOH and HNO_3 are K^+ and NO_3^- how to identify and list the

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web jun 2 2023 the spectator ions are cut out from a reaction hence the net ionic equation for the above reaction would be $2\text{Cl}^- \text{aq} + \text{Cu}^{2+} \text{aq} \rightarrow \text{CuCl}_2 \text{s}$ these spectator ions are not actively involved in the reaction the existence of spectator ions affects the debye length