0 01 00 (549)

Addition to special tools cabinet

All model series

Situation: At the beginning of 1997, the existing tools cabinet was equipped with new tools board sheets for improved clarity. The special tools were given a new order on the tools boards.

Please refer to SI 1 12 97 (202).

This concept should be retained and improved upon in the future. As the storage capacity on the existing tools boards is now exhausted, a new 2 x 1 m tools board is available with immediate effect.

The storage locations on this tools board are identified, as in the past, with plastic sheets which are automatically updated to the current status of tool selection prior to delivery.

A smaller, separately rigged special tools cabinet will be offered for storing the tools boards. This is initially based on a basic frame which has to have two side panels screwed on. In the event of subsequent extension in the form of additional frames, these side panels only have to be moved.

The new special tools cabinet can also be used as a room partition. In this case, two rear panels are required, which have to be ordered separately. Also available as options are shelves and drawer blocks for individual storage of workshop equipment.

To summarise the benefits of extending the special tools cabinet:

- Continuation of the coordinates system for storage location identification
- Modular system allows unproblematic extension
- Setup as room partition or individual room design

Procedure: The extension to the special tools cabinet and the associated accessories are available on a stores basis,

please refer to Enclosure 2.

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0 04 02 (937)

Workshop Equipment - Planning Documentation

Version 09/2002

Situation: 1.) The WEP CD (Workshop Equipment - Planning Documentation) has been revised. This CD version replaces the previous CD 08/2000.

2.) As pointed out in SWS2002-000202(877), workshop equipment has since 01.05.2002 been sold by the company Cartool. To this end Cartool offers a convenient way of ordering via the Cartool Internet Shop.

Procedure: 1.) You will automatically be sent the new WEP CD in the course of media allocation.Extra copies can be ordered where necessary from BMW Sales - Parts and Accessories (part number 01 69 0 026 085).

2.) For security reasons the Cartool Internet Shop can only be accessed by registered users with their name and password.Assignment of password: Please refer to Enclosure 1.The prices of the individual products are shown in the Internet Shop.

Note:

With regard to building and extending workshops, VS-23 can provide help and support in workshop and equipment planning.

The Service Information 0 02 00 (592) Workshop Equipment and Planning Documentation Version 08/2000 is no longer valid and must therefore be removed from the SI folder Special Tools and Equipment.

For a description of the WEP CD and the Cartool Internet Shop, please refer to Enclosure 1.

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0 02 02 (877)

Workshop equipment sales

All

Situation: There will be a change in work equipment sales as from 01.05.2002.For harmonisation reasons we are combining the procedures and operations for special tools and workshop equipment. This means that, as is the case with special tools, advice, sales, order processing and invoicing will be handled by the Ingolstadt-based company Cartool, which has been working for BMW for around 30 years.

All the usual services, i.e. expert advice, complete handling such as shipping logistics, customs formalities, service in accordance with order processing, remain unchanged.

Procedure: Take advantage of our customary advice and place your order based on our Workshop Equipment CD (WEP 01 69 0 026 085) with Cartool at the familiar address:

CARTOOL GmbHStraußenlettenstr. 15D-85053 Ingolstadt

Contact:Claudia Ziesing, Tel.: +49-841/9650023 - Fax: +49-841/9610848E-mail: C.Ziesing@cartool.de

Andreas Lang, Tel.: +49-841/9650024 - Fax: +49-841/9610848E-mail: A.Lang@cartool.de

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1 08 95 (965)

Release/pressing-off tool

From model year 94

Situation: Release and pressing-off tools are required for all the contact carriers and contacts fitted in the vehicle to enable repairs to the vehicle electrical system to be correctly carried out.

A tool kit, order no. 61 1 150, is presented and delivered by way of special offer for the first time with Service Information 1 03 89 (037).

See repair instructions 61 13.

The extended scope of electrical plug connections in the vehicle means that further tools are needed.

A new foam insert is available so that these tools can be arranged as a supplementary set in the tool box that has already been supplied.

Revised operating instructions are included with each supplementary set.

Procedure: Special offer tools are automatically dispatched in accordance with the present tools agreement.

Please refer to Enclosure 1.

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1 11 95 (990)

Gauge 21 2 070

All Model Series

Situation: As a result of design modifications made in conjunction with the introduction of the S6S 420G transmission, it is no longer possible to use gauge 21 2 070 for checking clutch disk wear.

A modified version of the gauge is now available which can be used for all transmissions again.

Please refer to Enclosure 1 for a list of special tools.

Procedure: Offer tools will be supplied automatically in accordance with the current tools agreement.

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2 04 00 (561)

Adapter cable for OBD socket

All series

Situation: Due to the discontinuation of the 20-pin BMW diagnosis socket in 06/2000 and 09/2000, an adapter cable will be required to connect the DIS (diagnosis system) and AU tester (emissions test) to the OBD socket (**O**n **B**oard **D**iagnosis).

(Please refer to Enclosure 1).

Procedure: The adapter cable will be supplied free of charge from calendar week 19/2000.

Additional requirements can be ordered at store price directly from the manufacturer.

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2 10 95 (015)

Adapter cable, 3-pin

All series

Situation: Adapter cable 61 1 491 was introduced in 1987 with SI 2 05 87 (795). It has been modified and can therefore also be used for testing the idle actuator. The new version is identified by a yellow shrinkable hose.

As of immediately, only this modified version will be delivered; order No. 61 1 491.

Procedure: Store tools are intended for repair shops and only supplied to order.

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2 08 95 (003)

Peripherals box, 26-pin

all models

Situation: Peripherals box 61 1 459 was introduced to the BMW dealer organisation in 1987 with SI 2 04 87 (783). As part of a technical update, high-quality, gold-plated measuring bushes have been introduced. This improvement now makes the peripherals box suitable for resistance measurements. The new peripherals box can be recognised from the green coloured ring on the measuring bushes.

With immediate effect, only the improved version will be supplied under order number 61 1 459.

Procedure: Store tools are intended for repair shops and are only supplied to order.

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1 08 95 (965)

Release/pressing-off tool

From model year 94

Situation: Release and pressing-off tools are required for all the contact carriers and contacts fitted in the vehicle to enable repairs to the vehicle electrical system to be correctly carried out.

A tool kit, order no. 61 1 150, is presented and delivered by way of special offer for the first time with Service Information 1 03 89 (037).

See repair instructions 61 13.

The extended scope of electrical plug connections in the vehicle means that further tools are needed.

A new foam insert is available so that these tools can be arranged as a supplementary set in the tool box that has already been supplied.

Revised operating instructions are included with each supplementary set.

Procedure: Special offer tools are automatically dispatched in accordance with the present tools agreement.

Please refer to Enclosure 1.

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11 40 Oil supply B48, B46

Oil grades and consumption: see recommended engine oils for BMW Group engines		
Filling capacity, engine oil change with oil filter element	Liter	5,25
Oil quantity in oil sump	Liter	4,95
Oil quantity in oil filter element	Liter	0,30

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23 00 Transmission in general S7S 47BG

Oil grade, refer to Operating Fluids		
Oil fill quantity for oil change	Litres	2.55
Oil fill quantity for initial fill or replacement transmission	Litres	2.75

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23 23 Synchronization GS6-53DZ

Distance between synchronizer ring and clutch body		
New condition		
1st/2nd gear	mm	2.70 ... 3.50
3rd/4th gear	mm	2.40 ... 3.10
5th/6th gear	mm	1.75 ... 2.10
Max. wear limit size	mm	
Reverse gear		
New condition	mm	2.70 ... 3.25
Max. wear limit size	mm	

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36 10 Wheels One-part alloy wheels

Max. radial runout of tire Rim with tire	max. mm	1.1
Max. axial runout or tire Rim with tire	max. mm	1.3
Max. radial runout out rim	max. mm	0.3
Max. axial runout of rim	max. mm	0.3
Max. imbalance for each side (before balancing)	max. g	90 for clamp weights 120 for stick-on weights
Permissible residual imbalance for each side (after balancing)	max. g	4
Elimination of imbalance: Up to 60 g with one weight or more than 60 g with two weights		

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36 10 Wheels Steel and aluminium strip wheels

Max. radial runout of tire Rim with tire	max. mm	1.6
Max. axial runout or tire Rim with tire	max. mm	1.8
Max. radial runout out rim	max. mm	0.8
Max. axial runout of rim	max. mm	0.8
Max. imbalance for each side (before balancing)	max. g	90 for clamp weights 120 for stick-on weights
Permissible residual imbalance for each side (after balancing)	max. g	4
Elimination of imbalance: Up to 60 g with one weight or more than 60 g with two weights		

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36 10 Wheels Two-part alloy wheels

Max. radial runout of tire Rim with tire	max. mm	1.3
Max. axial runout or tire Rim with tire	max. mm	1.5
Max. radial runout out rim	max. mm	0.5
Max. axial runout of rim	max. mm	0.5
Max. imbalance for each side (before balancing)	max. g	90 for clamp weights 120 for stick-on weights
Permissible residual imbalance for each side (after balancing)	max. g	4
Elimination of imbalance: Up to 60 g with one weight or more than 60 g with two weights		

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64 51 Heating and air-conditioning unit (evaporator), switching elements

Resistance as a function of temperature	°C/kΩ	-5/11.4 ... 11.9 0/8.8 ... 9.2 5/6.8 ... 7.2 10/5.3 ... 5.6 15/4.2 ... 4.5 20/3.3 ... 3.6 25/2.6 ... 2.9 30/2.1 ... 2.3 35/1.7 ... 1.9

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64 51 Heating and air-conditioning unit (expansion valve), switching elements

Inlet pressure (excess pressure)	bar	14
Outlet pressure (excess pressure)	bar	1.8
Leak test with detector at excess pressure	bar	1 ... 2

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