

23 Transmission designations

Breakdown of BMW designation:

A5S 300J (former designation)		
A	Transmission type	- S = Manual gearbox - A = Automatic transmission
5	Number of forward gears	
S	Type of top gear	- D = Direct gear - S = Overdrive gear
300	Max. input torque (Nm)	
J	Code letter of transmission manufacturer	- G = Getrag - J = Jatco - R = GMPT (General Motors Powertrain) - Z = ZF (Zahnradfabrik Friedrichshafen)
SMG	Notes	SMG = Sequential M gearbox/transmission

GS6-37BZ (new designation according to BMW Group Standard GS 90007)		
G	Transmission	
S	Transmission type	- S = Manual gearbox - A = Automatic transmission
6	Number of forward gears	
-		- = Standard with manual gearshift - HP = Hydraulic planetary gear - DKG= twin-clutch gearbox
37	Transmission type	26 = D-transmission 31 = C-transmission 39 = F-transmission 37 = H-transmission 53 = G-transmission 17 = I-transmission 47= J transmission SMG -7-speed 45 = K transmission 36= Transmission DKG
B	Gear set	- B = Petrol gear ratio - D = Diesel gear ratio - S= Sport gear ratio



Z	Code letter of transmission manufacturer	- G = Getrag - Z = ZF (Zahnradfabrik Friedrichshafen) - A = AISIN
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Manual gearbox:

BMW designation	Manufacturer	Manufacturer designation	Remarks
S5D 200G	Getrag	B transmission (220/5)	
S5D 200G	Getrag	B transmission (221/5)	for M41 engine only
S5D 250G	Getrag	B transmission (220/5)	Reinforced version
S5D 260Z	ZF	C-transmission (S5-31 D)	for M51 engine only
S5D 280Z	ZF	C-transmission (S5-31)	
S5D 310Z	ZF	C-transmission (S5-31)	up to 9.95
S5D 320Z	ZF	C-transmission (S5-31)	from 9.95 (reinforced version)
GS5S31BZ (SMG)	ZF	C transmission	SMG
GS5-39DZ	ZF	F transmission	
S6S 420G	Getrag	D-transmission (226/6)	
S6S 420G (SMG)	Getrag	D transmission	SMG
S6S 560G	Getrag	E-transmission (286/6)	
GS6-37BZ	ZF	H-transmission	
GS6S37BZ (SMG)	ZF	H-transmission	
GS6-37DZ	ZF	H-transmission	
GS6-37BG	Getrag	H-transmission	
GS6-53BZ	ZF	G-transmission	
GS6-53DZ	ZF	G-transmission	
GS6-17BG	Getrag	I-transmission	
GS6-17DG	Getrag	I-transmission	
GS7S47BG (SMG)	Getrag	J-transmission (247)	SMG -7-gear
GS7D36SG	Getrag	DKG (436)	DKG -7-gear
GS6- 45BZ	ZF	K transmission	
GS6- 45DZ	ZF	K transmission	
GS6-60DA/BA	AISIN	BG6	



7DCT300	Getrag	7DCT	DKG -7-gear
GS6-58DG/BG	Getrag		
GS6-59DG/BG	Getrag		

Automatic transmission:

BMW designation	Manufacturer	Manufacturer designation	Remarks
A4S 200R	General Motors Powertrain	GM4	
A4S 270R	General Motors Powertrain	THM-R1w	Transmission wide-stepped
A4S 310R	General Motors Powertrain	THM-R1	
A5S 300J	Jatco	Jatco	
A5S 310Z	ZF	5HP-18	
A5S 325Z	ZF	5HP-19	
A5S 440Z	ZF	5HP-24	
A5S 560Z	ZF	5HP-30	
A5S 360R / 390R	GM	GM5	
GA6F21AW	AISIN	GA6F21AW	
GA6HP19Z	ZF	6HP19	
GA6HP26Z	ZF	6HP26	
GA6HP32Z	ZF	6HP32	
GA6L45R	GM	GM6	
GA6F21AW	AISIN	GA6F21AW	
GA8F22AW	AISIN	GA8F22AW	
GA8G45	AISIN	8G45	
GA8HP45Z	ZF	8HP45	
GA8HP50Z	ZF	8HP50	
GA8HP51Z	ZF	8HP51	
GA8HP70Z	ZF	8HP70	
GA8HP75Z	ZF	8HP75	
GA8HP76Z	ZF	8HP76	
GA8P70H	ZF	8P70	Hybrid
GA8P75H	ZF	8P75	Hybrid
GA8HP90Z	ZF	8HP90	
GA8HP95Z	ZF	8HP95	



GA7AHSCD	Daimler	AHS-C	Hybrid
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23 ... Universal BMW transmission take-up



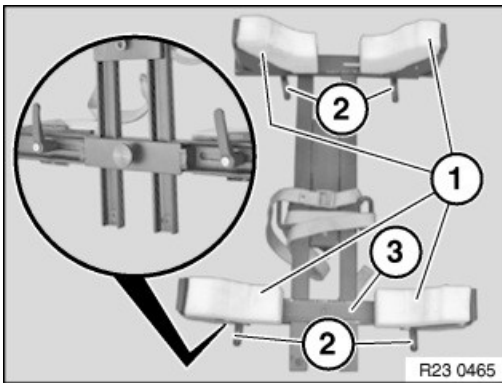
Special tools required:

- 00 2 030
- 23 4 050



Note:

- The universal transmission bracket is introduced for the E60 AWD
- Suitable for manual and automatic transmissions

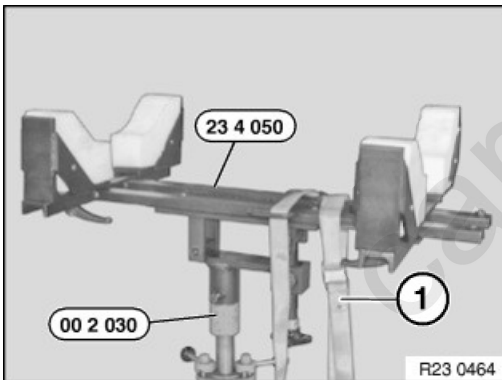


Important!

Front and rear supports (1) can be laterally adjusted by means of screws (2).

Carrier (3) of rear supports (1) can be longitudinally adjusted by means of screw.

Supports must be adapted in length and width to the transmission.



Supporting transmission:

Support transmission with special tools 23 4 050 , 00 2 030 .

Important!

Transmission must be secured with tensioning strap (1).



23 Universal transmission retaining bridge



Special tools required:

- 0 495 187
- 24 0 200



Note:

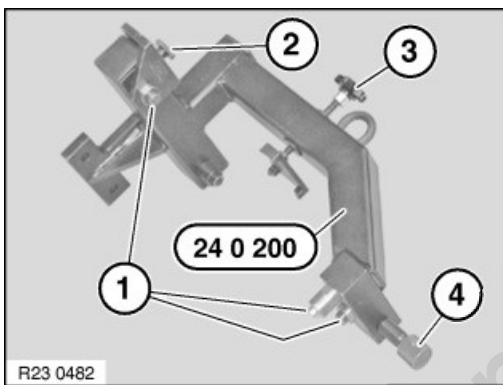
- Transmission retaining bridge 24 0 200 is suitable for manual and automatic transmissions



Attention!

The adapter and shaft must be adapted to positively lock with the transmission.

(Danger of injury)



Adapt the adapter (1) and spindle with the thrust piece (3) on the transmission.

Adjust the length using the sliding piece (2).

Screw in spindle (4).

Attention!

Before mounting on assembly stand 0 495 187 check retraining bridge for tight fit.



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S5D 200G	Getrag	B transmission (221/5)	for M41 engine only
S5D 250G	Getrag	B transmission (220/5)	Reinforced version
S5D 260Z	ZF	C-transmission (S5-31 D)	for M51 engine only
S5D 280Z	ZF	C-transmission (S5-31)	
S5D 310Z	ZF	C-transmission (S5-31)	up to 9.95
S5D 320Z	ZF	C-transmission (S5-31)	from 9.95 (reinforced version)
GS5S31BZ (SMG)	ZF	C transmission	SMG
GS5-39DZ	ZF	F transmission	
S6S 420G	Getrag	D-transmission (226/6)	
S6S 420G (SMG)	Getrag	D transmission	SMG
S6S 560G	Getrag	E-transmission (286/6)	
GS6-37BZ	ZF	H-transmission	
GS6S37BZ (SMG)	ZF	H-transmission	
GS6-37DZ	ZF	H-transmission	
GS6-37BG	Getrag	H-transmission	
GS6-53BZ	ZF	G-transmission	
GS6-53DZ	ZF	G-transmission	
GS6-17BG	Getrag	I-transmission	
GS6-17DG	Getrag	I-transmission	
GS7S47BG (SMG)	Getrag	J-transmission (247)	SMG -7-gear
GS7D36SG	Getrag	DKG (436)	DKG -7-gear
GS6- 45BZ	ZF	K transmission	
GS6- 45DZ	ZF	K transmission	
GS6-60DA/BA	AISIN	BG6	



7DCT300	Getrag	7DCT	DKG -7-gear
GS6-58DG/BG	Getrag		
GS6-59DG/BG	Getrag		

Automatic transmission:

BMW designation	Manufacturer	Manufacturer designation	Remarks
A4S 200R	General Motors Powertrain	GM4	
A4S 270R	General Motors Powertrain	THM-R1w	Transmission wide-stepped
A4S 310R	General Motors Powertrain	THM-R1	
A5S 300J	Jatco	Jatco	
A5S 310Z	ZF	5HP-18	
A5S 325Z	ZF	5HP-19	
A5S 440Z	ZF	5HP-24	
A5S 560Z	ZF	5HP-30	
A5S 360R / 390R	GM	GM5	
GA6F21AW	AISIN	GA6F21AW	
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GA6HP26Z	ZF	6HP26	
GA6HP32Z	ZF	6HP32	
GA6L45R	GM	GM6	
GA6F21AW	AISIN	GA6F21AW	
GA8F22AW	AISIN	GA8F22AW	
GA8G45	AISIN	8G45	
GA8HP45Z	ZF	8HP45	
GA8HP50Z	ZF	8HP50	
GA8HP51Z	ZF	8HP51	
GA8HP70Z	ZF	8HP70	
GA8HP75Z	ZF	8HP75	
GA8HP76Z	ZF	8HP76	
GA8P70H	ZF	8P70	Hybrid
GA8P75H	ZF	8P75	Hybrid
GA8HP90Z	ZF	8HP90	
GA8HP95Z	ZF	8HP95	



GA7AHSCD	Daimler	AHS-C	Hybrid
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23 ... Universal BMW transmission take-up



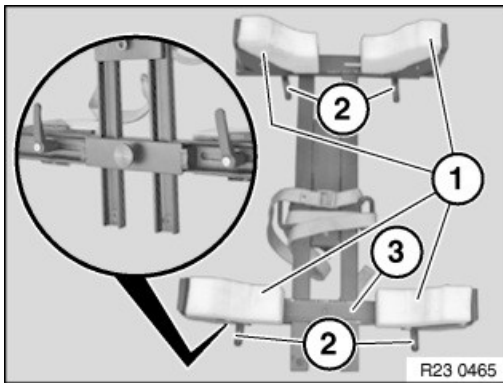
Special tools required:

- 00 2 030
- 23 4 050



Note:

- The universal transmission bracket is introduced for the E60 AWD
- Suitable for manual and automatic transmissions

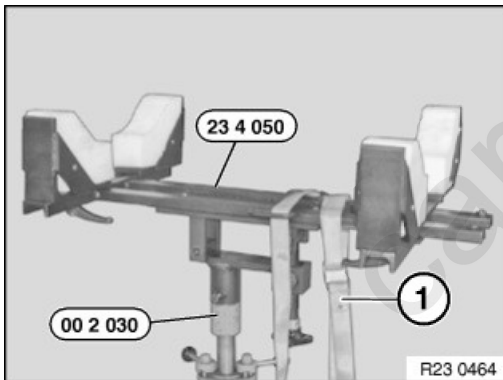


Important!

Front and rear supports (1) can be laterally adjusted by means of screws (2).

Carrier (3) of rear supports (1) can be longitudinally adjusted by means of screw.

Supports must be adapted in length and width to the transmission.



Supporting transmission:

Support transmission with special tools 23 4 050 , 00 2 030 .

Important!

Transmission must be secured with tensioning strap (1).



23 Universal transmission retaining bridge



Special tools required:

- 0 495 187
- 24 0 200



Note:

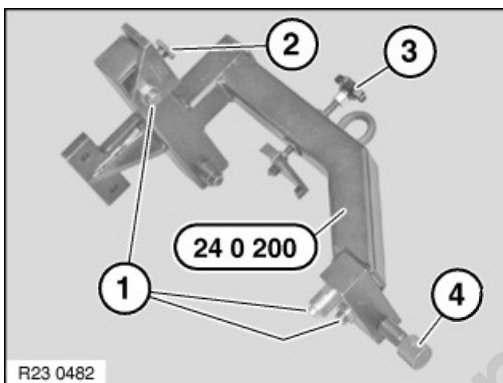
- Transmission retaining bridge 24 0 200 is suitable for manual and automatic transmissions



Attention!

The adapter and shaft must be adapted to positively lock with the transmission.

(Danger of injury)



Adapt the adapter (1) and spindle with the thrust piece (3) on the transmission.

Adjust the length using the sliding piece (2).

Screw in spindle (4).

Attention!

Before mounting on assembly stand 0 495 187 check retraining bridge for tight fit.



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GS6-37BZ	ZF	H-transmission	
GS6S37BZ (SMG)	ZF	H-transmission	
GS6-37DZ	ZF	H-transmission	
GS6-37BG	Getrag	H-transmission	
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GS6-53DZ	ZF	G-transmission	
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GS6- 45DZ	ZF	K transmission	
GS6-60DA/BA	AISIN	BG6	



7DCT300	Getrag	7DCT	DKG -7-gear
GS6-58DG/BG	Getrag		
GS6-59DG/BG	Getrag		

Automatic transmission:

BMW designation	Manufacturer	Manufacturer designation	Remarks
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A4S 310R	General Motors Powertrain	THM-R1	
A5S 300J	Jatco	Jatco	
A5S 310Z	ZF	5HP-18	
A5S 325Z	ZF	5HP-19	
A5S 440Z	ZF	5HP-24	
A5S 560Z	ZF	5HP-30	
A5S 360R / 390R	GM	GM5	
GA6F21AW	AISIN	GA6F21AW	
GA6HP19Z	ZF	6HP19	
GA6HP26Z	ZF	6HP26	
GA6HP32Z	ZF	6HP32	
GA6L45R	GM	GM6	
GA6F21AW	AISIN	GA6F21AW	
GA8F22AW	AISIN	GA8F22AW	
GA8G45	AISIN	8G45	
GA8HP45Z	ZF	8HP45	
GA8HP50Z	ZF	8HP50	
GA8HP51Z	ZF	8HP51	
GA8HP70Z	ZF	8HP70	
GA8HP75Z	ZF	8HP75	
GA8HP76Z	ZF	8HP76	
GA8P70H	ZF	8P70	Hybrid
GA8P75H	ZF	8P75	Hybrid
GA8HP90Z	ZF	8HP90	
GA8HP95Z	ZF	8HP95	



GA7AHSCD	Daimler	AHS-C	Hybrid
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23 ... Universal BMW transmission take-up



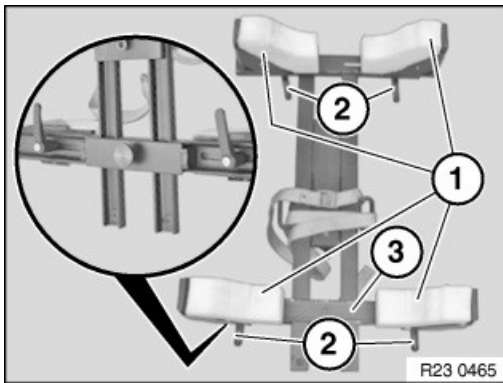
Special tools required:

- 00 2 030
- 23 4 050



Note:

- The universal transmission bracket is introduced for the E60 AWD
- Suitable for manual and automatic transmissions

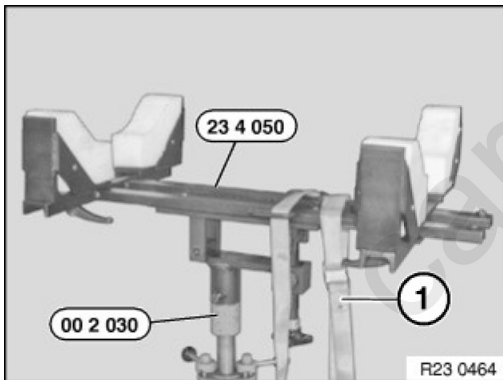


Important!

Front and rear supports (1) can be laterally adjusted by means of screws (2).

Carrier (3) of rear supports (1) can be longitudinally adjusted by means of screw.

Supports must be adapted in length and width to the transmission.



Supporting transmission:

Support transmission with special tools 23 4 050 , 00 2 030 .

Important!

Transmission must be secured with tensioning strap (1).



23 Universal transmission retaining bridge



Special tools required:

- 0 495 187
- 24 0 200



Note:

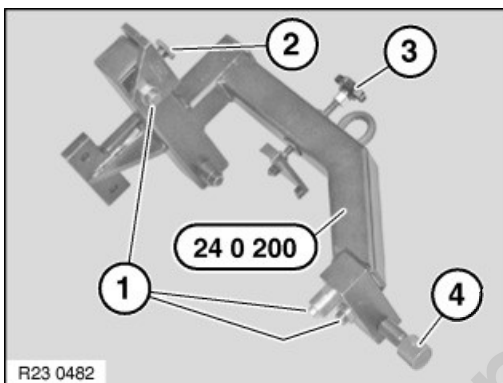
- Transmission retaining bridge 24 0 200 is suitable for manual and automatic transmissions



Attention!

The adapter and shaft must be adapted to positively lock with the transmission.

(Danger of injury)



Adapt the adapter (1) and spindle with the thrust piece (3) on the transmission.

Adjust the length using the sliding piece (2).

Screw in spindle (4).

Attention!

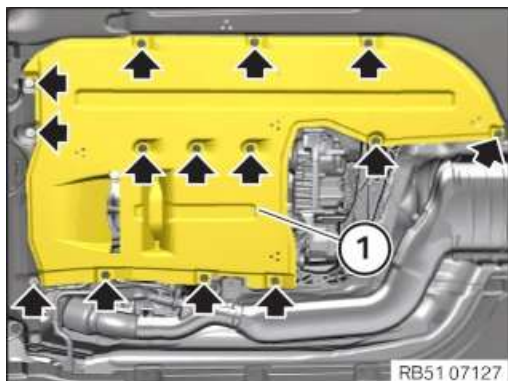
Before mounting on assembly stand 0 495 187 check retraining bridge for tight fit.



24 11 104 Removing and installing/sealing or replacing transmission oil sump

PRELIMINARY WORK

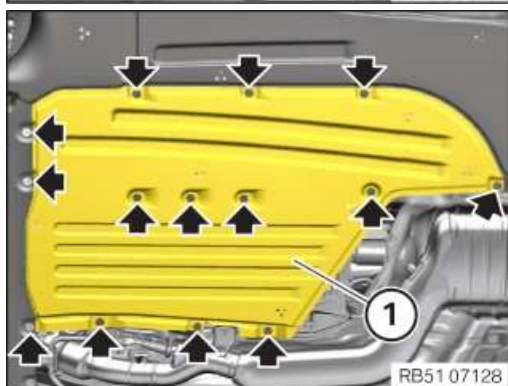
1 – Remove rear underbody protection



- **Version A:**

Remove screws (arrows).

Feed out the rear underbody protection (1).



- **Version B:**

Remove screws (arrows).

Guide out rear underbody protection (1) and remove it.

MAIN WORK

2 – Removing the transmission oil sump (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)



CAUTION

Materials harmful to health.

Contact with fluids harmful to health!

- Note and follow safety information on containers.
- Conduct all work in appropriate personal protective equipment only.



RISK OF DAMAGE

Damage to the transmission oil sump.

Non-observance of the transmission oil specifications may lead to severe damage to the automatic transmission.

- Remove transmission oil sump only after it has cooled down.
- Use only the approved transmission oil.
- After completion of repair work, check transmission oil level.

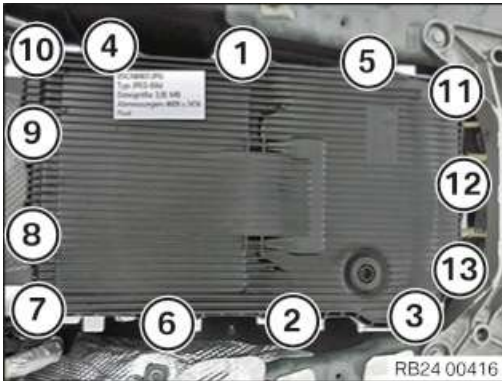


TECHNICAL INFORMATION

Collect and dispose of emerging fluids. Observe country-specific waste disposal regulations.



- Release oil drain plug (1).
- Drain automatic transmission oil.

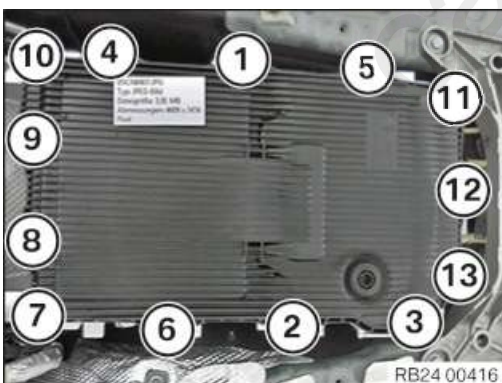


- Loosen screws (1) to (13).
- Remove transmission oil sump.

3 – Installing the transmission oil sump (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)

TECHNICAL INFORMATION

The transmission oil sump must be renewed each time it is released.



- Clean the contact surface of the transmission oil sump on the transmission.
- Renew screws (1) to (13).

Parts: Bolts

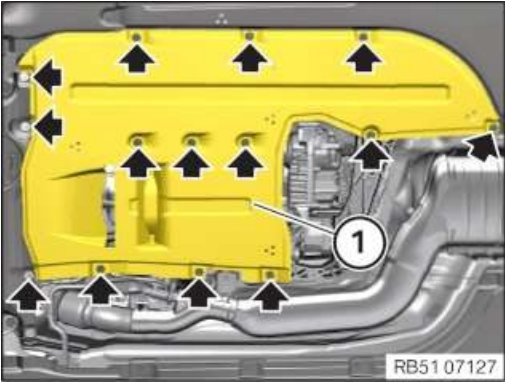
- Position the transmission oil sump.
- Tighten screws hand-tight.
- Tighten screws in the order (1) to (13).



- If necessary, tighten the oil drain plug (1).

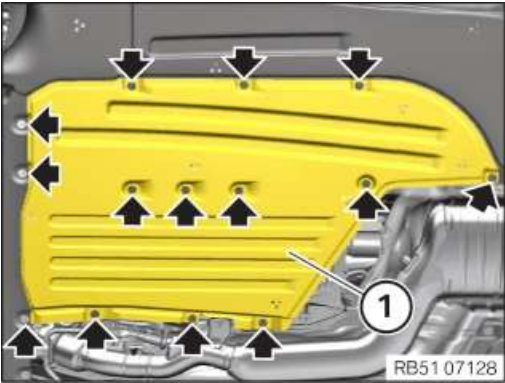


4 – Installing underbody protection at rear



- **Version A:**
Insert and install the rear underbody protection (1).
Tighten screws (arrows).

Underbody protection			
Hexagon screw		Tightening torque	3 Nm



- **Version B:**
Insert and install the rear underbody protection (1).
Tighten screws (arrows).

Underbody protection			
Hexagon screw		Tightening torque	3 Nm

Additional Information

Overview of Tightening Torques

Underbody protection			Used in step 4
Hexagon screw		Tightening torque	3 Nm

Overview of Special Tools

Overview Technical Data

Links

Operating materials	Used in step
14.0 Automatic transmission fluid for ZF-transmission GA8HP45Z / GA8HP50Z / GA8HP70Z / GA8HP90Z / GA8P70H / GA8P75H / GA8HP75Z	



24 30 108 Removing and installing/replacing the hydraulic impulse storage

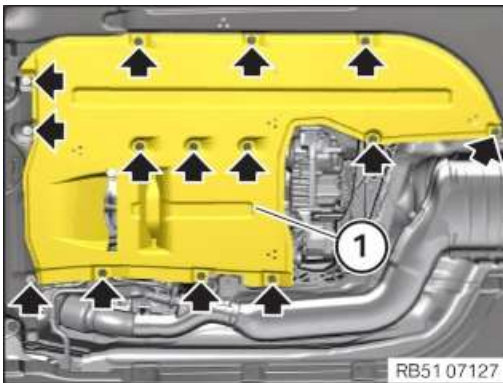
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

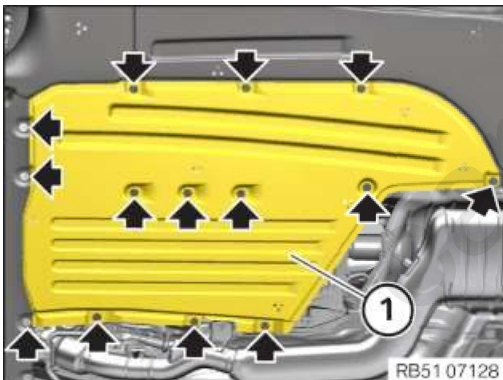
2 – Remove rear underbody protection



- **Version A:**

Remove screws (arrows).

Feed out the rear underbody protection (1).



- **Version B:**

Remove screws (arrows).

Guide out rear underbody protection (1) and remove it.

3 – Removing the transmission oil sump (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)



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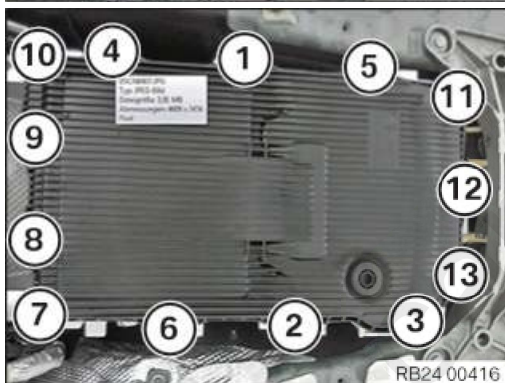


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- Loosen screws (1) to (13).
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MAIN WORK

POSTPROCESSES

4 – Installing the transmission oil sump (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)

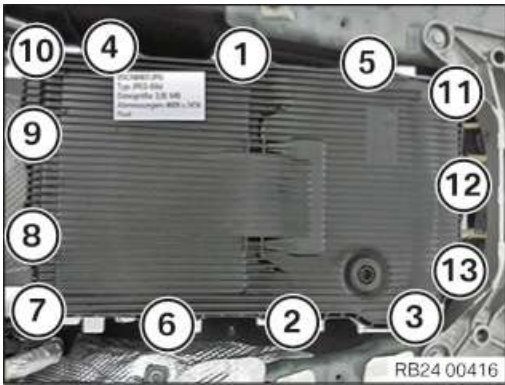


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- Renew screws (1) to (13).
- Parts: Bolts**
- Position the transmission oil sump.
 - Tighten screws hand-tight.
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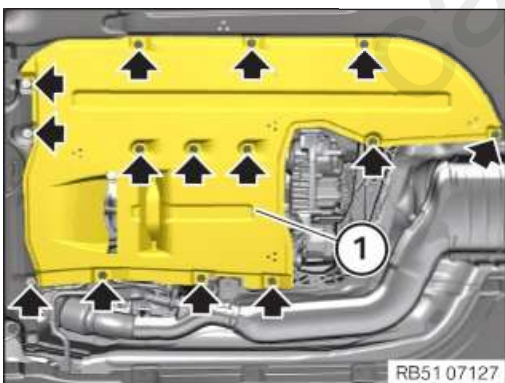
- If necessary, tighten the oil drain plug (1).

5 – Connecting all battery earth leads



- See additional information.

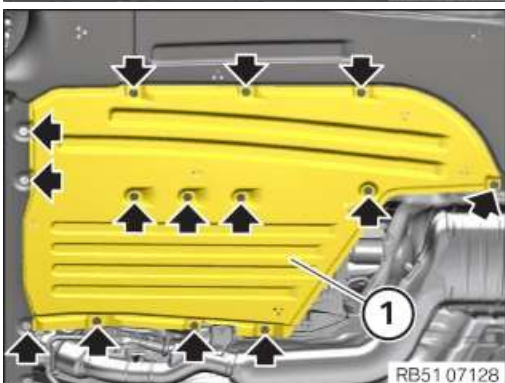
6 – Installing underbody protection at rear



- **Version A:**
Insert and install the rear underbody protection (1).
Tighten screws (arrows).

Underbody protection

Hexagon screw		Tightening torque	3 Nm
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- **Version B:**
Insert and install the rear underbody protection (1).
Tighten screws (arrows).

Underbody protection

Hexagon screw		Tightening torque	3 Nm
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Additional Information

Overview of Tightening Torques

Underbody protection

Used in step 6

Hexagon screw	Tightening torque	3 Nm
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Overview of Special Tools

Overview Technical Data

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Operating materials

Used in step

14.0 Automatic transmission fluid for ZF-transmission GA8HP45Z / GA8HP50Z / GA8HP70Z / GA8HP90Z / GA8P70H / GA8P75H / GA8HP75Z



24 34 613 Replace mechatronics

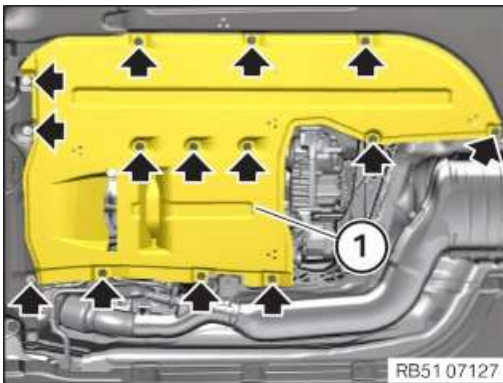
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

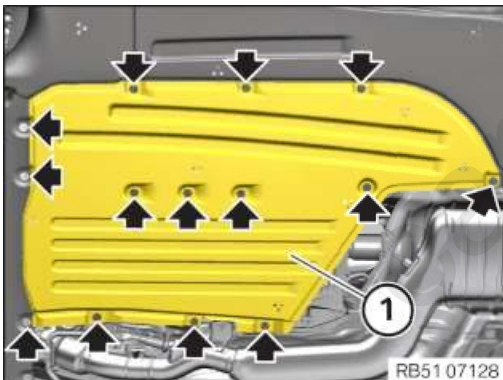
2 – Remove rear underbody protection



- **Version A:**

Remove screws (arrows).

Feed out the rear underbody protection (1).



- **Version B:**

Remove screws (arrows).

Guide out rear underbody protection (1) and remove it.

3 – Removing the transmission oil sump (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)



CAUTION

Materials harmful to health.

Contact with fluids harmful to health!

- Note and follow safety information on containers.
- Conduct all work in appropriate personal protective equipment only.





RISK OF DAMAGE

Damage to the transmission oil sump.

Non-observance of the transmission oil specifications may lead to severe damage to the automatic transmission.

- Remove transmission oil sump only after it has cooled down.
- Use only the approved transmission oil.
- After completion of repair work, check transmission oil level.

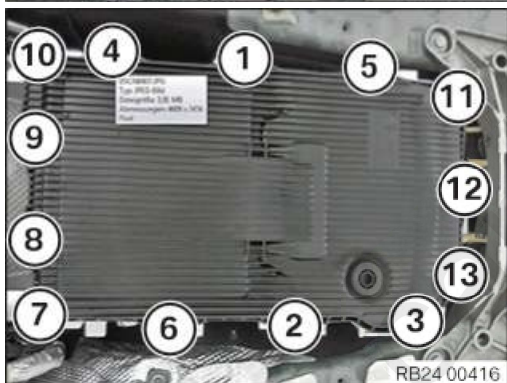


TECHNICAL INFORMATION

Collect and dispose of emerging fluids. Observe country-specific waste disposal regulations.



- Release oil drain plug (1).
- Drain automatic transmission oil.



- Loosen screws (1) to (13).
- Remove transmission oil sump.

MAIN WORK

POSTPROCESSES

4 – Installing the transmission oil sump (GA8HP50Z, GA8HP51Z, GA8HP75Z, GA8HP76Z)

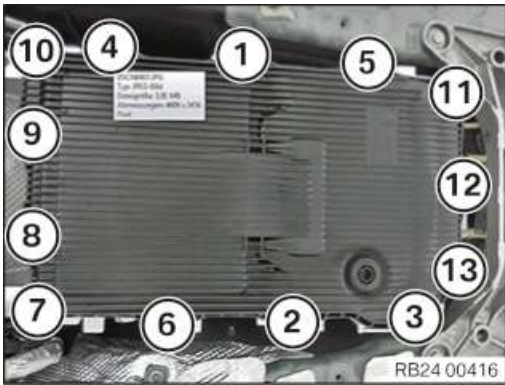


TECHNICAL INFORMATION

The transmission oil sump must be renewed each time it is released.

- Clean the contact surface of the transmission oil sump on the transmission.





- Renew screws (1) to (13).
- Parts: Bolts**
- Position the transmission oil sump.
 - Tighten screws hand-tight.
 - Tighten screws in the order (1) to (13).



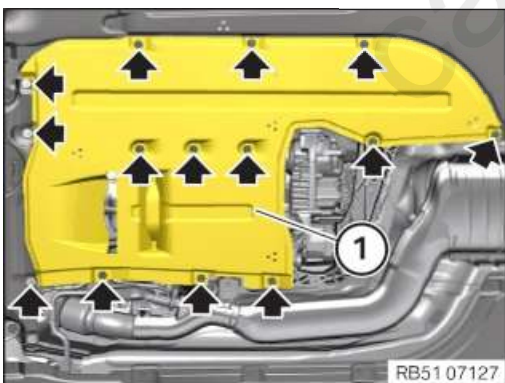
- If necessary, tighten the oil drain plug (1).

5 – Connecting all battery earth leads



- See additional information.

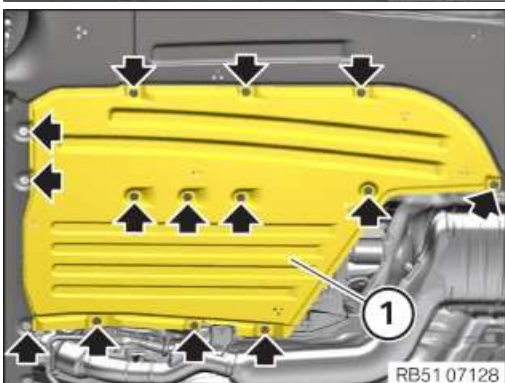
6 – Installing underbody protection at rear



- **Version A:**
Insert and install the rear underbody protection (1).
Tighten screws (arrows).

Underbody protection

Hexagon screw		Tightening torque	3 Nm
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- **Version B:**
Insert and install the rear underbody protection (1).
Tighten screws (arrows).

Underbody protection

Hexagon screw		Tightening torque	3 Nm
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Additional Information

Overview of Tightening Torques

Underbody protection

Used in step 6

Hexagon screw	Tightening torque	3 Nm
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Operating materials

Used in step

14.0 Automatic transmission fluid for ZF-transmission GA8HP45Z / GA8HP50Z / GA8HP70Z / GA8HP90Z / GA8P70H / GA8P75H / GA8HP75Z

