

26 00 Additional work on all-wheel drive vehicles after driving with faulty (non-engaging) drive



Attention!

If the vehicle has been moved under engine power with a non-engaging drive system (e.g. faulty front propeller shaft, or one output shaft is no longer engaging with the drive flange, rear axle differential faulty/no power transmission), it is mandatory to calibrate the transfer box after having repaired the propeller shaft/output shaft(s).



Carry out calibration after having completed the repair using the diagnosis system and information system, in Control unit function - Function check - Transfer box.

26 11 000 Removing and installing complete propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

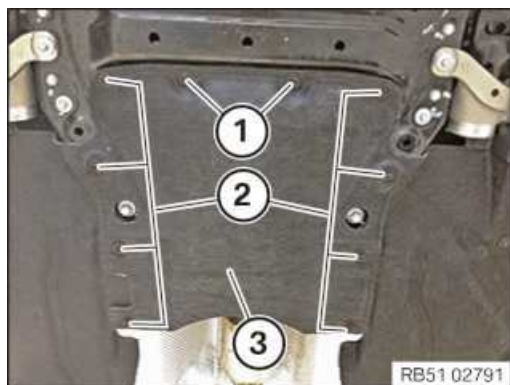
Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.

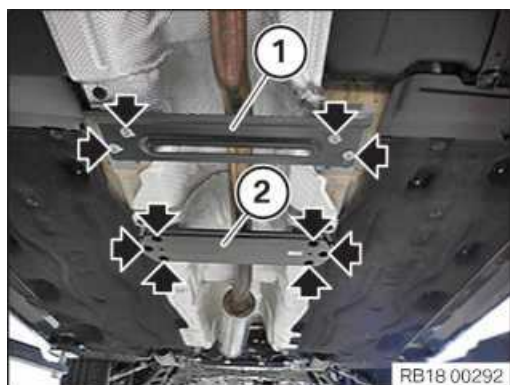
PRELIMINARY WORK

1 – If installed: Removing rear underbody protection



- Loosen screws (1) and (2).
- Remove underbody protection (3).

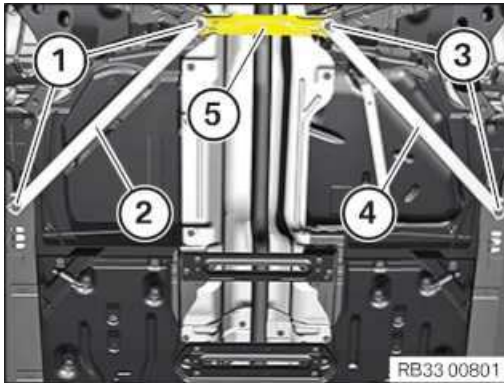
2 – Removing the connecting support from the tunnel in front and back



- Unscrew the bolts (arrows) from the connecting support (1).
- Feed out and remove the crossbeam (1).
- Unscrew the bolts (arrows) from the connecting support (2).
- Feed out and remove the crossbeam (2).

3 – Remove the cross strut with the torsion strut

Driving without a torsion strut is not permitted.



- Loosen screws (1).
- Thread out torsion strut (2) at left and remove.
- Loosen screws (3).
- Thread out torsion strut (4) at right and remove.
- Feed out and remove the cross-member (5).

4 – Remove exhaust system



WARNING

Hot surfaces.

Risk of burning!

- Perform all work only on components that have cooled down.

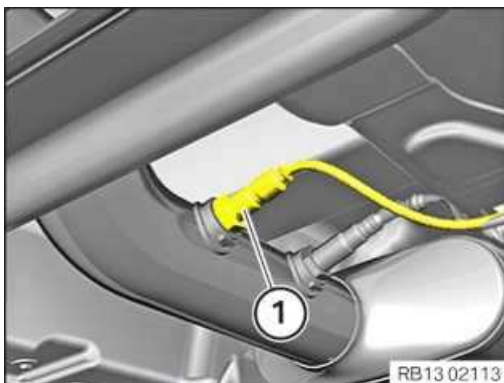


CAUTION

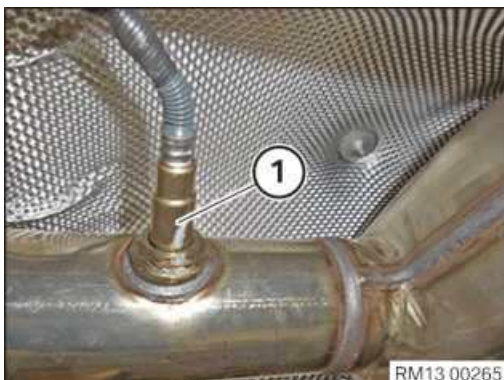
Heavy component.

Heavy components can lead to injury or damage.

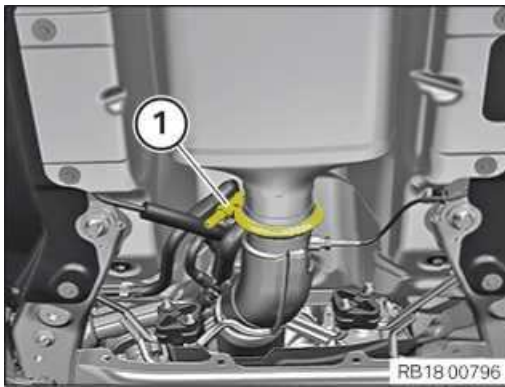
- Remove and install heavy components with the aid of another person/other persons.



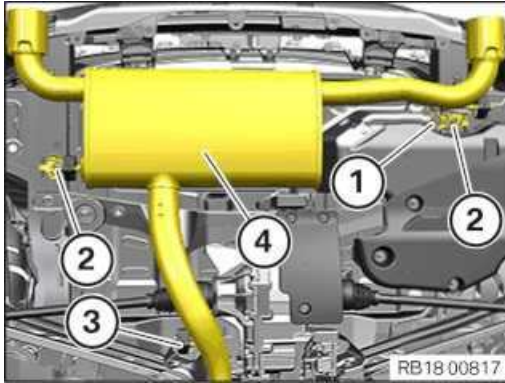
- Release the nitrogen oxide sensor (1) downstream of the SCR catalytic converter, guide it out and set it aside.



- Release the diesel particulate sensor (1), guide it out and set it aside.

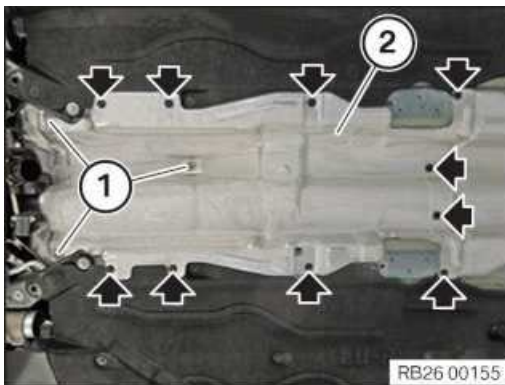


- Loosen V-band clamp (1).



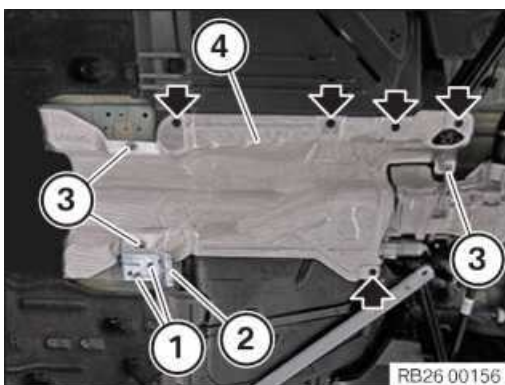
- Loosen screw (1).
- Loosen nuts (2).
- Release the rubber mount (3) of the exhaust system (4).
- Lower and guide out the exhaust system (4) with assistance of a second person and remove it.

5 – Remove front heat shield



- Remove screws (arrows).
- Loosen nuts (1).
- Guide the heat shield (2) out and remove it.

6 – Remove heat shield at rear.



- Loosen screws (1).
- Guide out and remove holder (2).
- Remove screws (arrows).
- Loosen nuts (3).
- Guide the heat shield (4) out and remove it.

MAIN WORK

7 – Remove propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

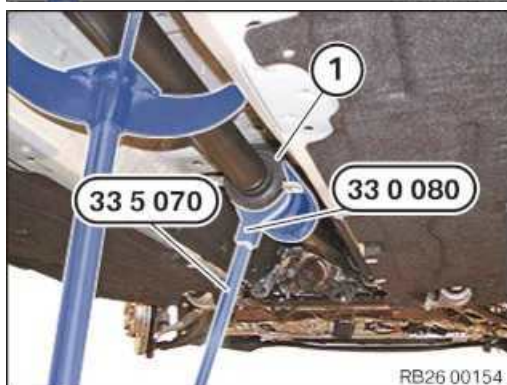
- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.



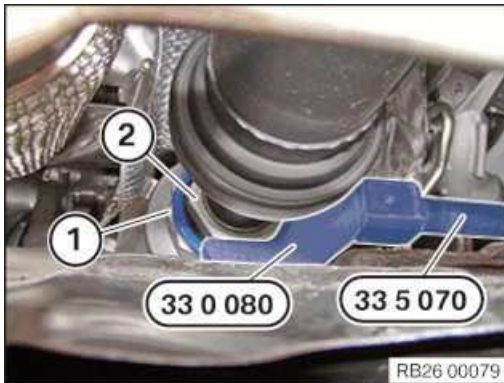
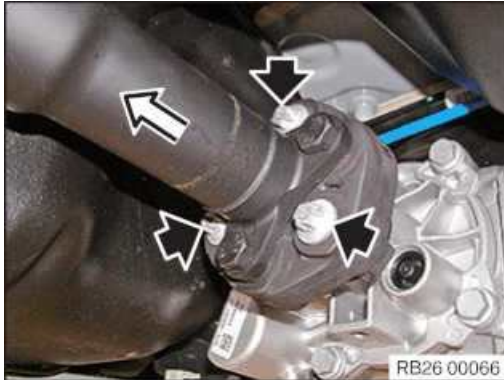
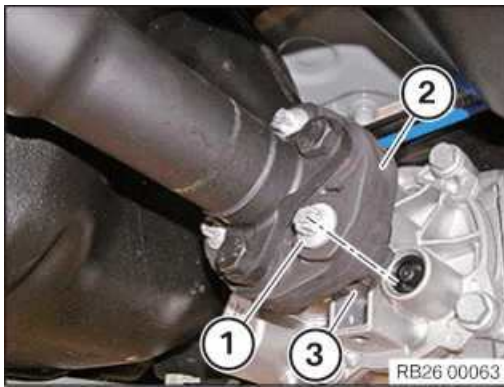
- Install the special tool between the front and rear propeller shaft.
- Make sure that the arrows on the special tool point forward in the direction of travel.



- Always support the propeller shaft (1) with a conventional jack.



- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.



TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Mark the installation position of the screw connection (1), the flexible disc (2) and the three-hole flange (3) on the same level.
- Loosen the screw connection (1).
- Loosen screws (1).
- Remove screws (arrows).
- Guide the propeller shaft out in the direction of the arrow and set it aside.



RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

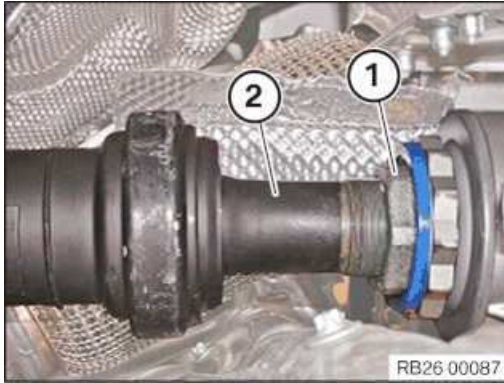
- Do not use the double hexagon head flange nut as counter support.
- Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .

The recessed nut (2) on the transfer box must **not** be used to detach the propeller shaft.

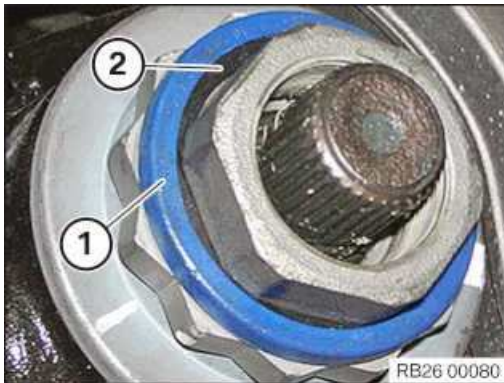
The double hexagon flange nut (1) must **not** be used for counter support.



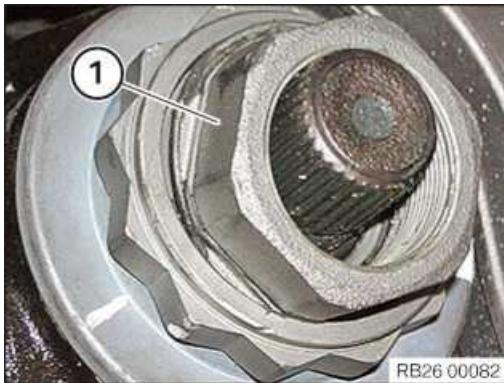
- Release the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.



- Thread the propeller shaft (2) out of the recessed nut (1) and remove.



- Thread the retaining clip (1) and the seal (2) out and remove.



- Thread out and remove the recessed nut (1).

8 – Install propeller shaft.



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to the propeller shaft during installation.

Non-observance of the installation guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Always renew the recessed nut on the rear axle differential. Screw locking must be available.
- Strictly observe a minimum hardening time of two hours after having screwed in the recessed nut. The hardening time may be longer at lower temperatures.

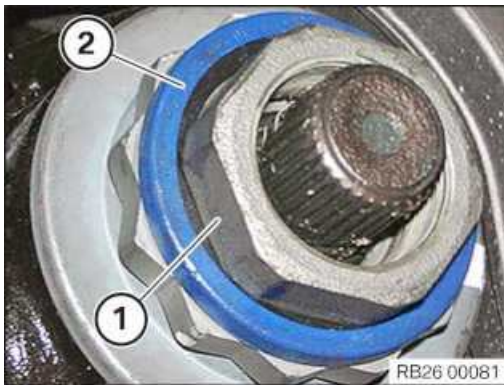


RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.



- Renew recessed nut (1).

Parts: Insert nut

- Renew the retaining clip (2) and the seal.

Parts: Retaining clip, seal

- Insert the seal with the recessed nut (1) and install.
- Insert the retaining clip (2) and install.
- Make sure that recessed nut (1) is screwed in within 5 min.
- Make sure that the hardening time of **minimum** 2 h for the recessed nut is observed.

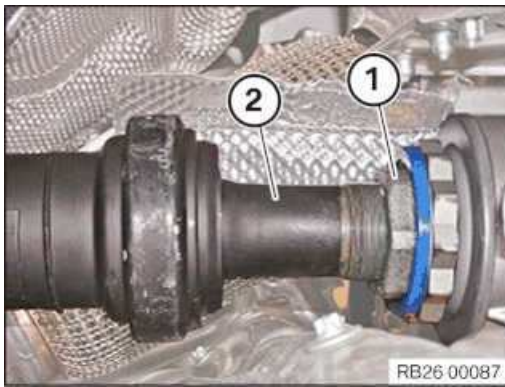
The hardening time must be extended at lower temperatures.



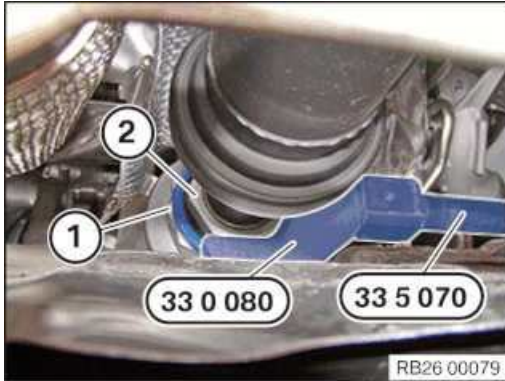
- Insert the propeller shaft (1) and install.
- Always support the propeller shaft (1) with a conventional jack.



- Hand-tighten the bolts (1).



- Push the propeller shaft (2) against the recessed nut (1) up to the limit position.
- Screw the propeller shaft (2) at least 2 thread starts onto the recessed nut (1) by hand.



RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.

- Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .

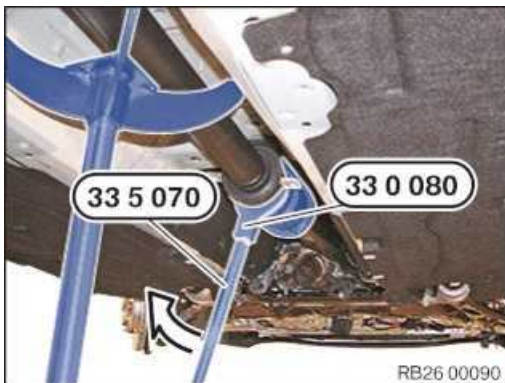
The recessed nut (2) on the transfer box must **not** be used to tighten the propeller shaft.

The double hexagon flange nut (1) must **not** be used for counter support.

- Tighten the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.

Propeller shaft to transfer box

		Tightening torque	80 Nm
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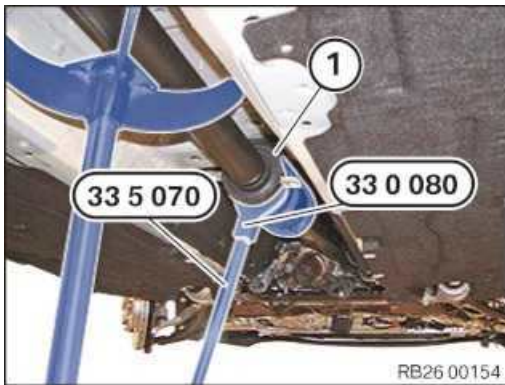
TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Assemble the screw connection (1) of the flexible disc (2) and the three-hole flange (3) according to the mark.
- Renew screws (1).

Parts: Bolts

- Hand-tighten the bolts (1).



- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.



- Tighten the bolts with the special tools **0 490 504 (00 9 120)** and .

Flexible disc to rear axle final drive

M12x1.5	Renew screws.	Tightening torque	55 Nm
			90 °



- Tighten the screws (1).

Centre mount to body

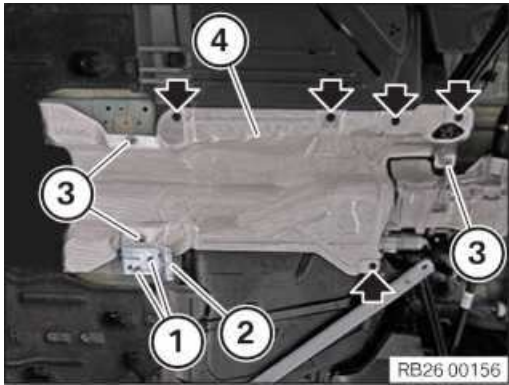
M8		Tightening torque	19 Nm
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- Guide the special tool out between the front and rear propeller shaft and remove.

POSTPROCESSES

9 – Installing the rear heat shield



- Insert and install the heat shield (4).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (3).

Heat shield to body

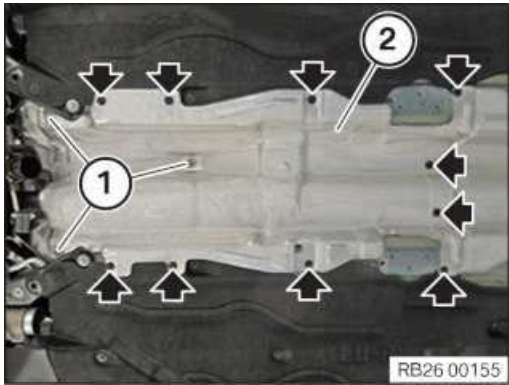
Bolts/nut		Tightening torque	3 Nm
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- Insert and install the holder (2).
- Tighten the screws (1).

Bracket to body

M8		Tightening torque	21 Nm
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10 – Install the front heat shield



- Insert and install the heat shield (2).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (1).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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11 – Install exhaust system



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.

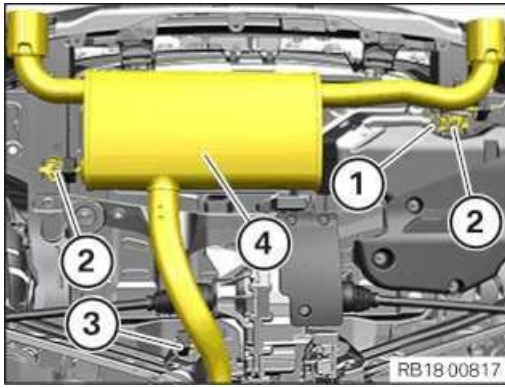


CAUTION

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.



- Feed in and install the exhaust system (4) with a second person.
- Renew nuts (2).

Parts: Nuts

- Tighten nuts (2).

Exhaust system to body

M8	Replace nuts.	Tightening torque	19 Nm
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- Tighten down screw (1).

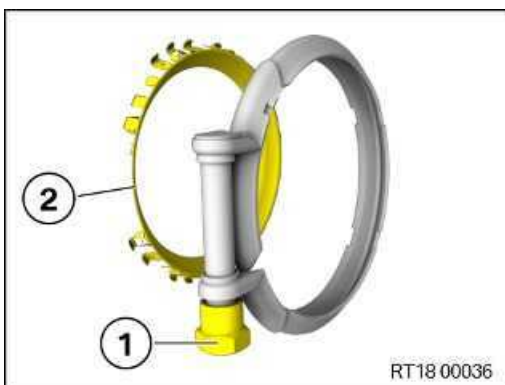
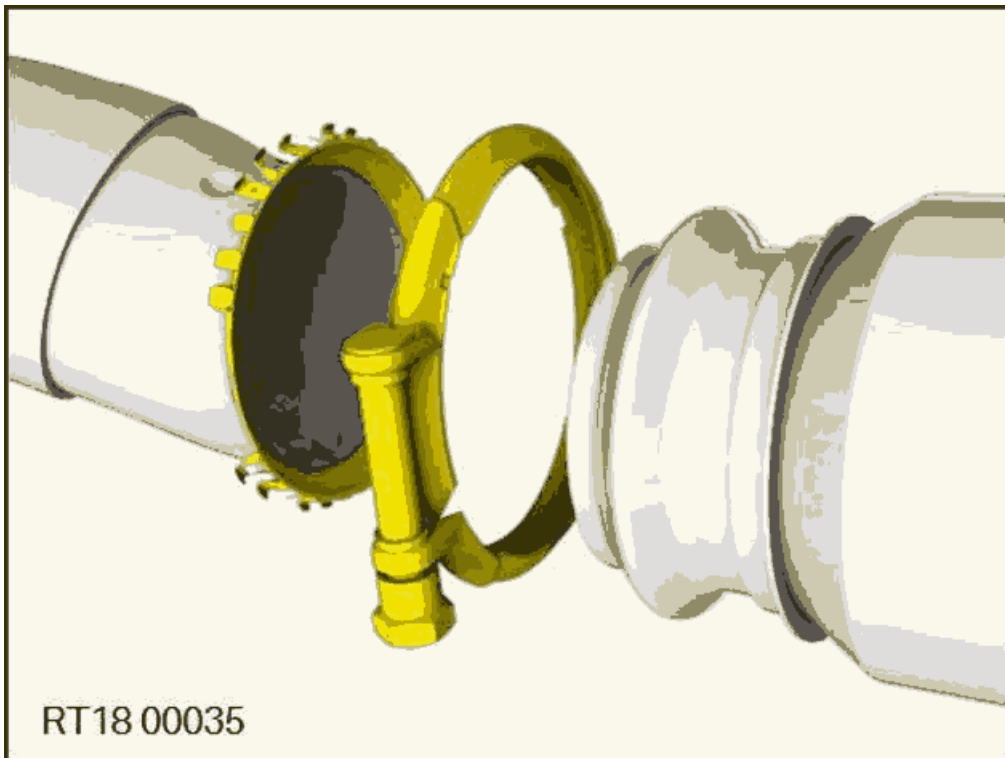
Exhaust bracket on body

Hexagon screw M8x30		Tightening torque	19 Nm
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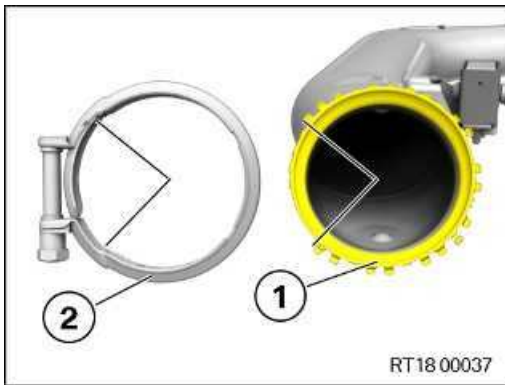
- Check the rubber mount (3) for damage and renew as needed.
- Mount rubber mount (3) on the exhaust system (4).

► Install the V-clip

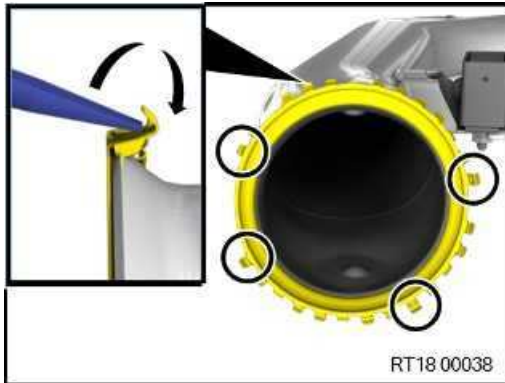
V-band clamp



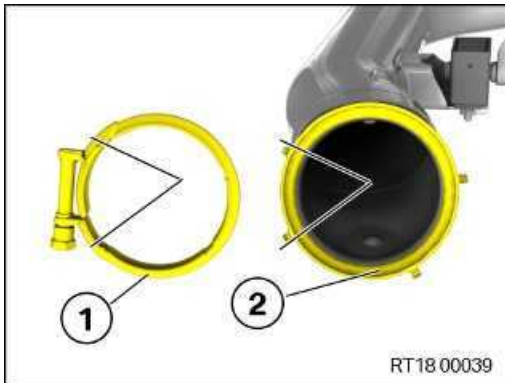
- Unscrew the nut (1) and remove the sealing ring (2).



- Renew the V-clip (2).
- Parts:** V-band clamp
- Mount the sealing ring (1) on the exhaust system.
- Ensure that the sealing ring (1) for the V-clip (2) is positioned correctly.



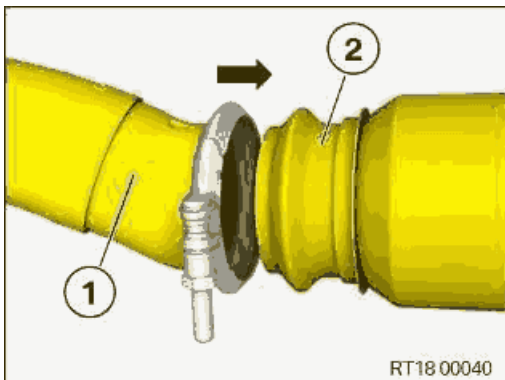
- Bend all sheet metal tabs over with a suitable tool, except those in the marked areas.



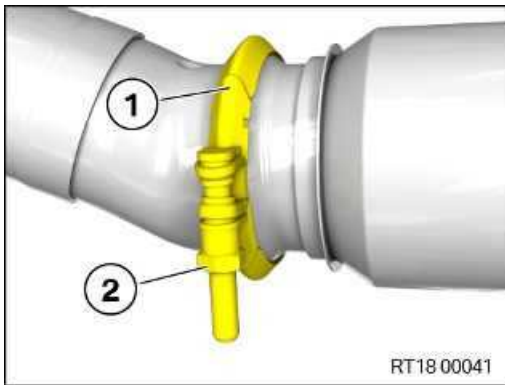
- Mount the V-clip (1) on the sealing ring (2).
- Make sure that the V-clip (1) is positioned correctly on the sealing ring (2).



- Make sure that the V-clip rests against the sheet metal tabs after mounting (marks).



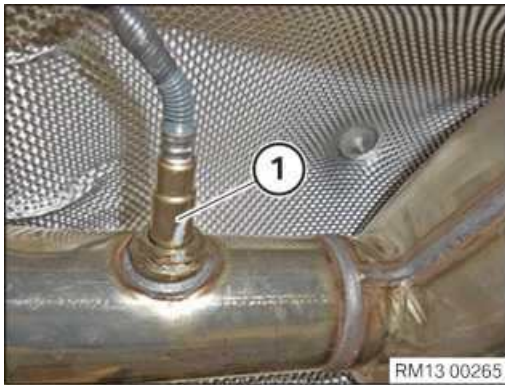
- Connect the exhaust system (1) with the catalytic converter (2) and position correctly.



- Make sure that V-clip (1) is fitted correctly.
- Tighten down screw (2).

V-clip to catalytic converter

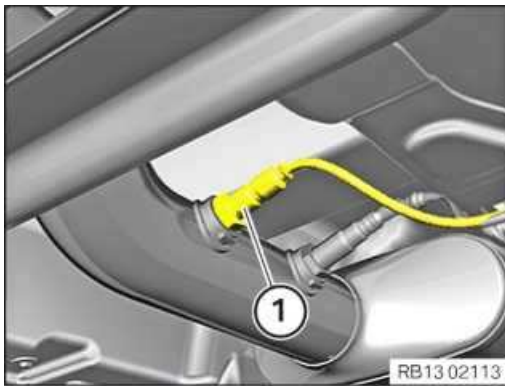
V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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- Feed in, install and tighten diesel particulate sensor (1).

Diesel particulate sensor to exhaust system

Sensor		Tightening torque	50 Nm
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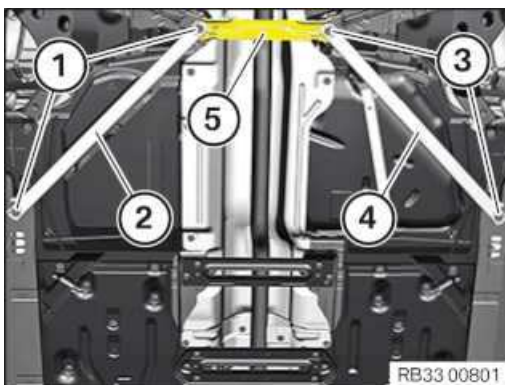


- Feed in, install and tighten nitrogen oxide sensor (1).

Nitrogen oxide sensor downstream of SCR catalytic converter

Sensor		Tightening torque	50 Nm
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12 – Install the cross-member with torsion struts



- Insert and install the cross-member (5).
- Thread in torsion strut (4) at right and install.
- Renew screws (3).
- Tighten down screws (3).

Parts: Bolts

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

- Guide in and install the left torsion strut (2).
- Renew screws (1).

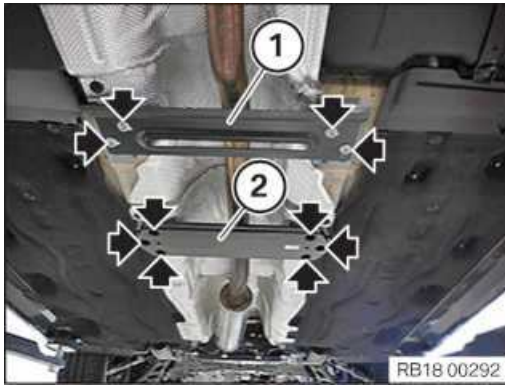
Parts: Bolts

- Tighten the screws (1).

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

13 – Install the connecting support on the tunnel in front and back



- Insert and install connecting supports (2).
- Tighten the screws (arrows) from the connecting support (2).

Front connection carrier to body

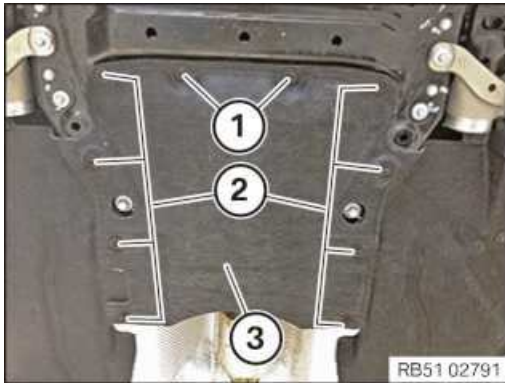
M10x18		Tightening torque	56 Nm
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- Insert and install connecting supports (1).
- Tighten the screws (arrows) from the connecting support (1).

Rear connection carrier to body

M8x18		Tightening torque	28 Nm
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14 – If installed: Installing underbody protection at rear



- Install the underbody protection (3).
- Tighten down screws (1) and (2).

Underbody protection to body

Screw		Tightening torque	3 Nm
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Additional Information

Overview of Tightening Torques

Propeller shaft to transfer box

Used in step [8](#)

		Tightening torque	80 Nm
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Flexible disc to rear axle final drive

Used in step [8](#)

M12x1.5	Renew screws.	Tightening torque	55 Nm 90 °
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Centre mount to body

Used in step [8](#)

M8		Tightening torque	19 Nm
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Heat shield to body

Used in step [9](#) [10](#)

Bolts/nut		Tightening torque	3 Nm
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Bracket to body

Used in step [9](#)

M8		Tightening torque	21 Nm
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Exhaust system to body

Used in step [11](#)

M8	Replace nuts.	Tightening torque	19 Nm
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Exhaust bracket on body

Used in step [11](#)

Hexagon screw M8x30		Tightening torque	19 Nm
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V-clip to catalytic converterUsed in step [11](#)

V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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Diesel particulate sensor to exhaust systemUsed in step [11](#)

Sensor		Tightening torque	50 Nm
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Nitrogen oxide sensor downstream of SCR catalytic converterUsed in step [11](#)

Sensor		Tightening torque	50 Nm
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Cross-member/torsion strut to axle support and mountingUsed in step [12](#)

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

Front connection carrier to bodyUsed in step [13](#)

M10x18		Tightening torque	56 Nm
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Rear connection carrier to bodyUsed in step [13](#)

M8x18		Tightening torque	28 Nm
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Underbody protection to bodyUsed in step [14](#)

Screw		Tightening torque	3 Nm
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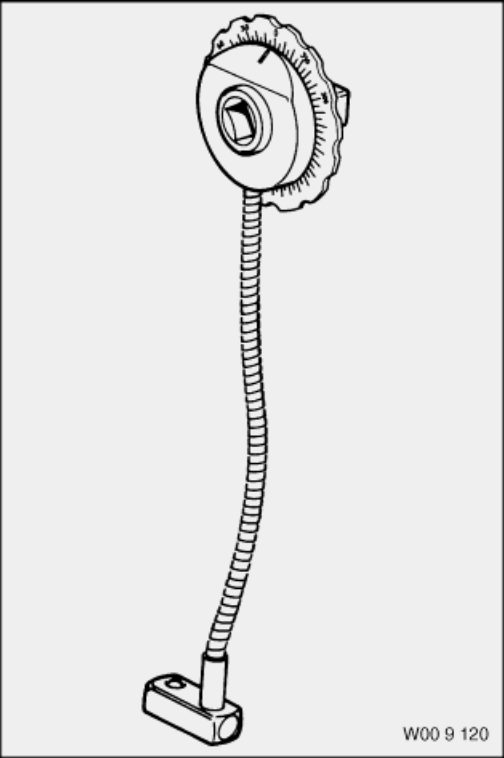
Overview of Special Tools**0 495 554 (33 5 070) Extension****Common**Used in step [7](#) [8](#)

Usage	Pull-out extension for 33 5 040, 33 5 050, 33 5 060.
Included in the tool or work	
Storage location	A18
Replaced by	
In connection with	
SI-Number	01 21 06 (300)

Consisting of

Pos	BMW Order number	Replaced by	Designation	In Connection with
1	0 495 592 (33 5 071)		Extension (Extension (1 item)) discontinued, can only be ordered using complete tool	

0 490 504 (00 9 120) Torque angle measuring dial



Common

Used in step 8

Usage	For torsion angle adjustment of cylinder head bolts (all engines) And reinforcement plate front axle support E46
Included in the tool or work	
Storage location	A4
Replaced by	
In connection with	
SI-Number	

26 11 090 Replacing centring for propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

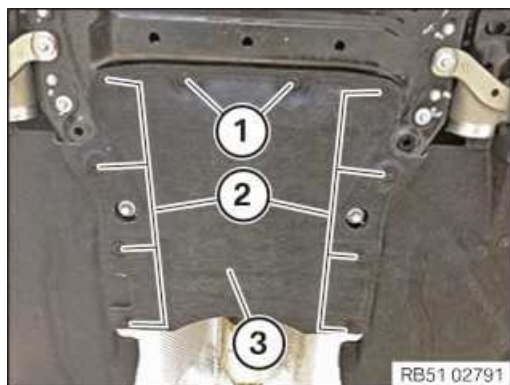
Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.

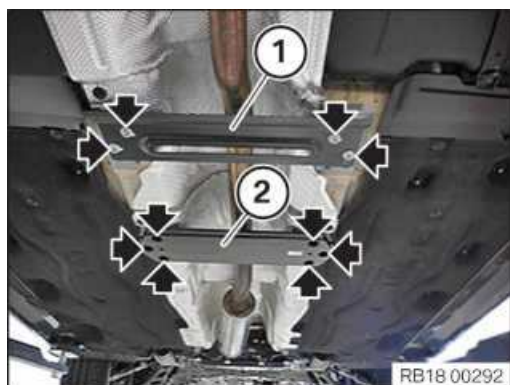
PRELIMINARY WORK

1 – If installed: Removing rear underbody protection



- Loosen screws (1) and (2).
- Remove underbody protection (3).

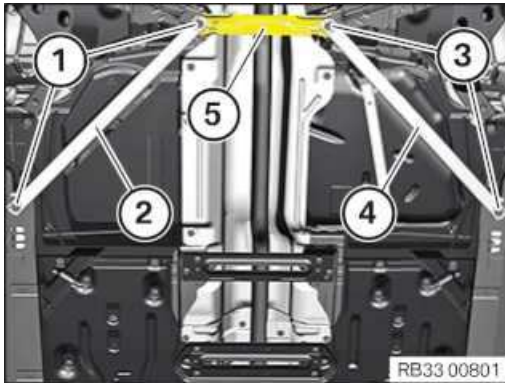
2 – Removing the connecting support from the tunnel in front and back



- Unscrew the bolts (arrows) from the connecting support (1).
- Feed out and remove the crossbeam (1).
- Unscrew the bolts (arrows) from the connecting support (2).
- Feed out and remove the crossbeam (2).

3 – Remove the cross strut with the torsion strut

Driving without a torsion strut is not permitted.



- Loosen screws (1).
- Thread out torsion strut (2) at left and remove.
- Loosen screws (3).
- Thread out torsion strut (4) at right and remove.
- Feed out and remove the cross-member (5).

4 – Remove exhaust system



WARNING

Hot surfaces.

Risk of burning!

- Perform all work only on components that have cooled down.

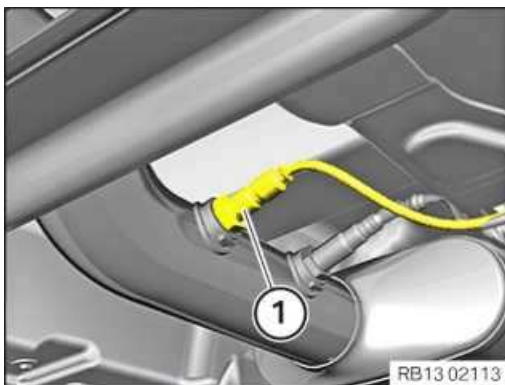


CAUTION

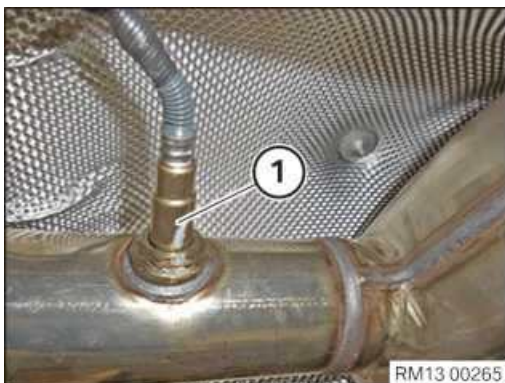
Heavy component.

Heavy components can lead to injury or damage.

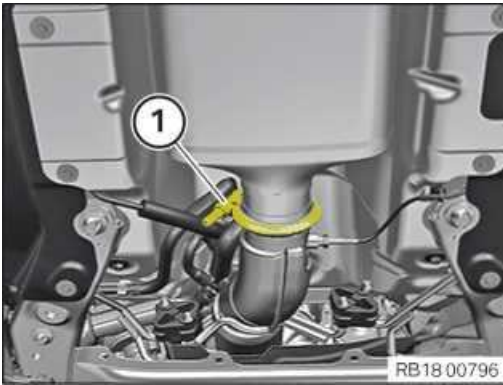
- Remove and install heavy components with the aid of another person/other persons.



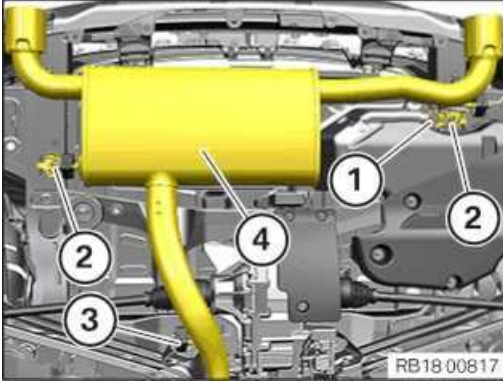
- Release the nitrogen oxide sensor (1) downstream of the SCR catalytic converter, guide it out and set it aside.



- Release the diesel particulate sensor (1), guide it out and set it aside.

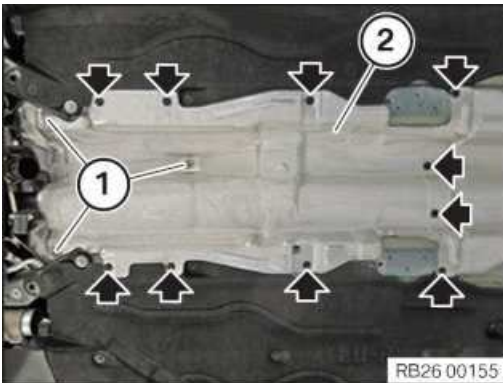


- Loosen V-band clamp (1).



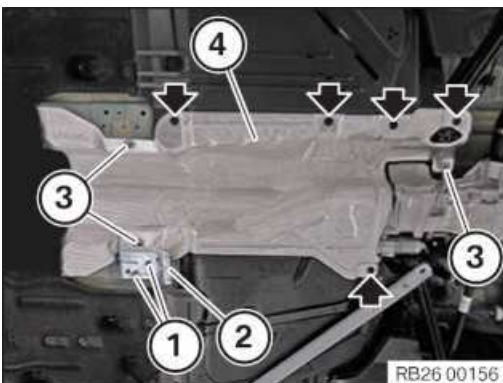
- Loosen screw (1).
- Loosen nuts (2).
- Release the rubber mount (3) of the exhaust system (4).
- Lower and guide out the exhaust system (4) with assistance of a second person and remove it.

5 – Remove front heat shield



- Remove screws (arrows).
- Loosen nuts (1).
- Guide the heat shield (2) out and remove it.

6 – Remove heat shield at rear.



- Loosen screws (1).
- Guide out and remove holder (2).
- Remove screws (arrows).
- Loosen nuts (3).
- Guide the heat shield (4) out and remove it.

7 – Remove propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

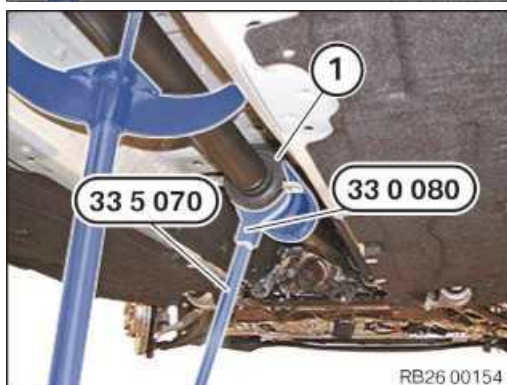
- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.



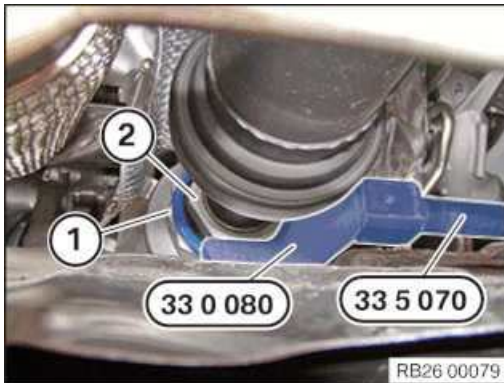
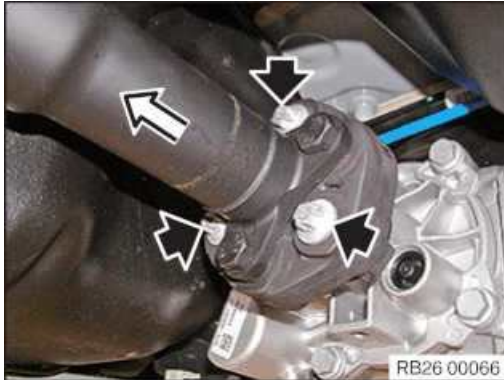
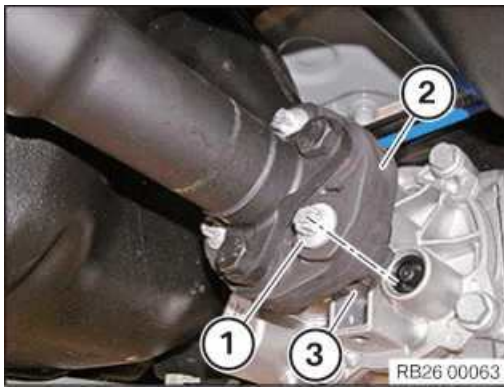
- Install the special tool between the front and rear propeller shaft.
- Make sure that the arrows on the special tool point forward in the direction of travel.



- Always support the propeller shaft (1) with a conventional jack.



- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.



TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Mark the installation position of the screw connection (1), the flexible disc (2) and the three-hole flange (3) on the same level.
- Loosen the screw connection (1).
- Loosen screws (1).
- Remove screws (arrows).
- Guide the propeller shaft out in the direction of the arrow and set it aside.



RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

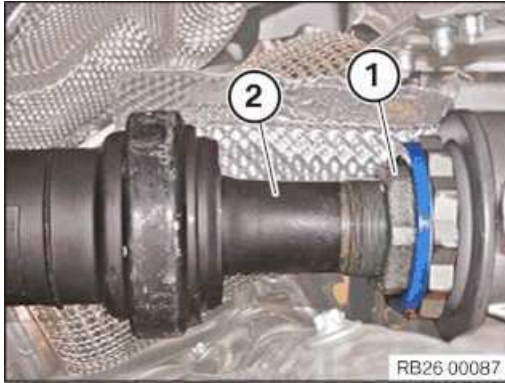
- Do not use the double hexagon head flange nut as counter support.
- Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .

The recessed nut (2) on the transfer box must **not** be used to detach the propeller shaft.

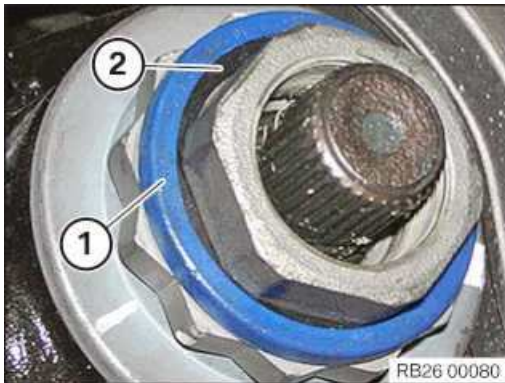
The double hexagon flange nut (1) must **not** be used for counter support.



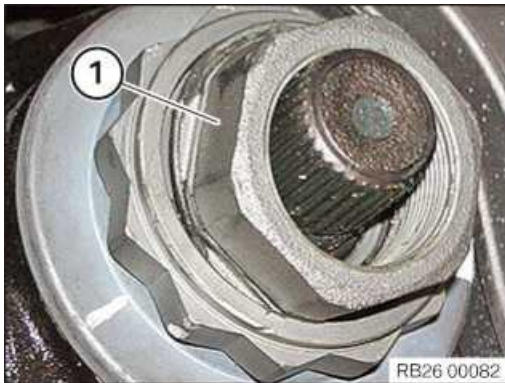
- Release the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.



- Thread the propeller shaft (2) out of the recessed nut (1) and remove.



- Thread the retaining clip (1) and the seal (2) out and remove.



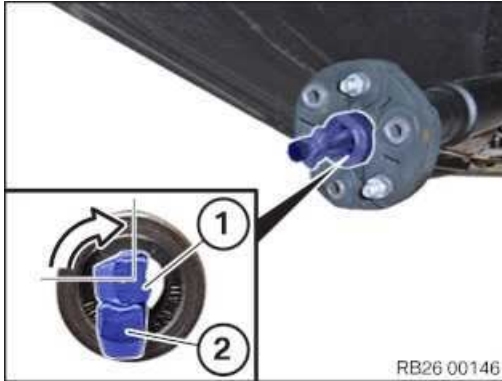
- Thread out and remove the recessed nut (1).

MAIN WORK

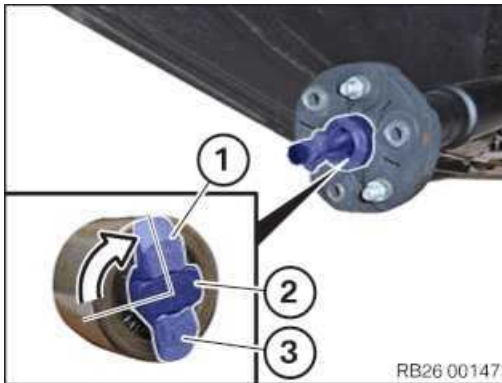
8 – Removing the centring for the propeller shaft



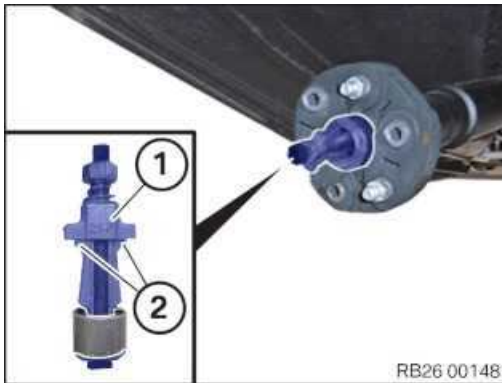
- Use special tool **2 450 247** to remove the centring bearing.



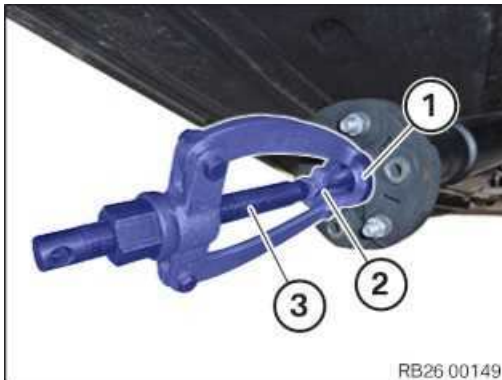
- Insert pin (1) and pin (2) of the special tool **2 450 247** in the centring bearing of the propeller shaft.
- Turn pin (1) by 90° in relation to pin (2).



- Insert pin (2) between pin (1) and (3) of the special tool **2 450 247** into the centring bearing of the propeller shaft.
- Twist the pin (2) by 90°.



- Lock the special tool **2 450 247** by turning the sleeve (1).

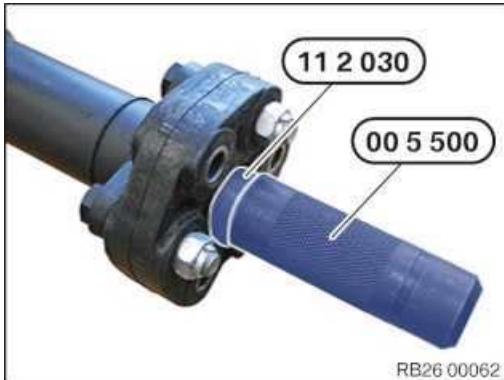


- Install the guide sleeve (1).
- Screw together spindle (3) with the special tool **2 450 247**(2) and support at the guide sleeve (1).



- Turn nut (1) in direction of arrow and pull out centring bearing.

9 – Installing the centring for the propeller shaft



- Remove grease from centring bore.

Note: Plastic centring mount must not be greased.

- Drive centring into propeller shaft with special tools and (observe protrusion).



- Observe protrusion A = 6 mm of centring (1).

POSTPROCESSES

10 – Install propeller shaft.



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to the propeller shaft during installation.

Non-observance of the installation guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Always renew the recessed nut on the rear axle differential. Screw locking must be available.
- Strictly observe a minimum hardening time of two hours after having screwed in the recessed nut. The hardening time may be longer at lower temperatures.

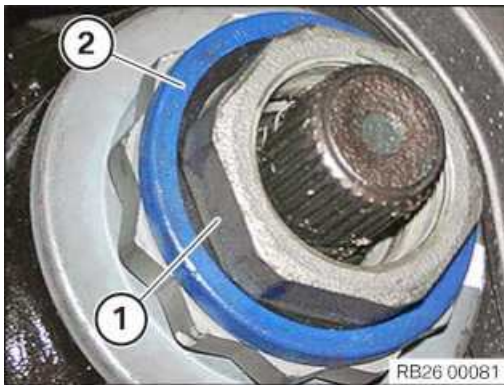


RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.



- Renew recessed nut (1).

Parts: Insert nut

- Renew the retaining clip (2) and the seal.

Parts: Retaining clip, seal

- Insert the seal with the recessed nut (1) and install.
- Insert the retaining clip (2) and install.
- Make sure that recessed nut (1) is screwed in within 5 min.
- Make sure that the hardening time of **minimum** 2 h for the recessed nut is observed.

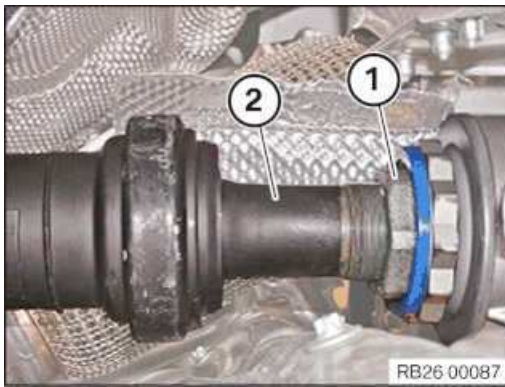
The hardening time must be extended at lower temperatures.



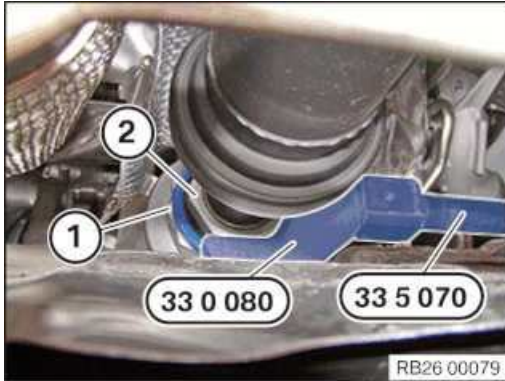
- Insert the propeller shaft (1) and install.
- Always support the propeller shaft (1) with a conventional jack.



- Hand-tighten the bolts (1).



- Push the propeller shaft (2) against the recessed nut (1) up to the limit position.
- Screw the propeller shaft (2) at least 2 thread starts onto the recessed nut (1) by hand.



RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.

- Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .

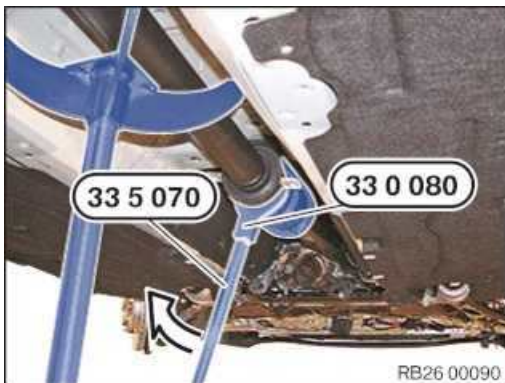
The recessed nut (2) on the transfer box must **not** be used to tighten the propeller shaft.

The double hexagon flange nut (1) must **not** be used for counter support.

- Tighten the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.

Propeller shaft to transfer box

		Tightening torque	80 Nm
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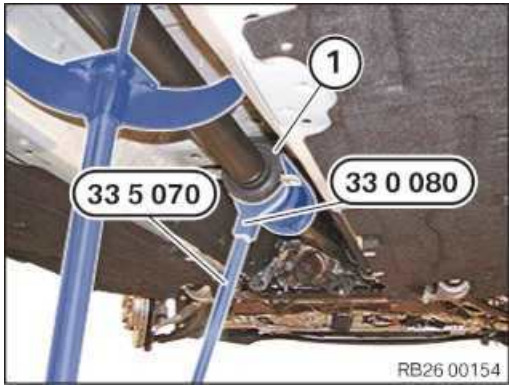
TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Assemble the screw connection (1) of the flexible disc (2) and the three-hole flange (3) according to the mark.
- Renew screws (1).

Parts: Bolts

- Hand-tighten the bolts (1).



- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.



- Tighten the bolts with the special tools **0 490 504 (00 9 120)** and .

Flexible disc to rear axle final drive

M12x1.5	Renew screws.	Tightening torque	55 Nm
			90 °



- Tighten the screws (1).

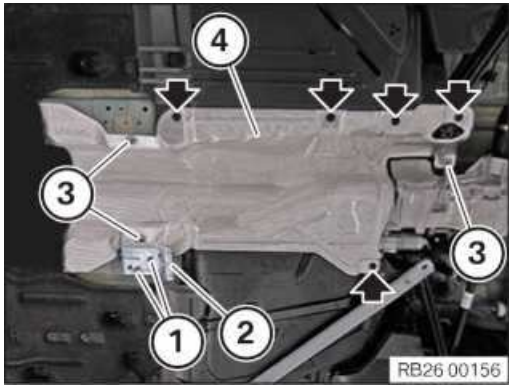
Centre mount to body

M8		Tightening torque	19 Nm
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- Guide the special tool out between the front and rear propeller shaft and remove.

11 – Installing the rear heat shield



- Insert and install the heat shield (4).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (3).

Heat shield to body

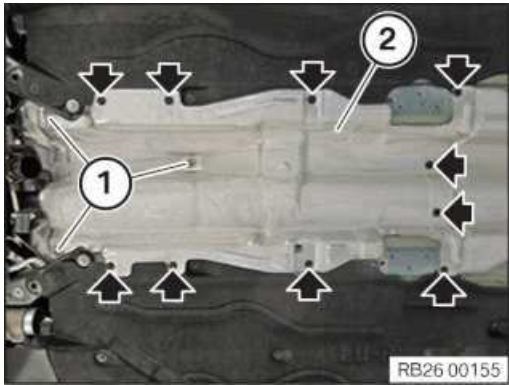
Bolts/nut		Tightening torque	3 Nm
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- Insert and install the holder (2).
- Tighten the screws (1).

Bracket to body

M8		Tightening torque	21 Nm
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12 – Install the front heat shield



- Insert and install the heat shield (2).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (1).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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13 – Install exhaust system



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.

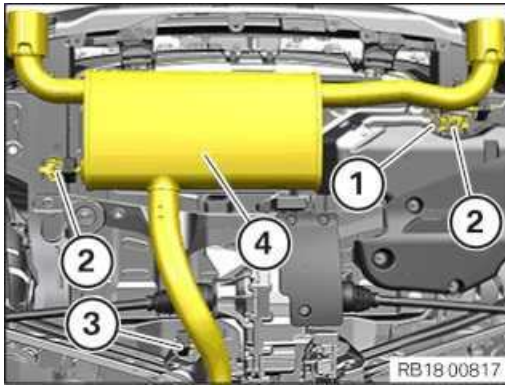


CAUTION

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.



- Feed in and install the exhaust system (4) with a second person.
- Renew nuts (2).

Parts: Nuts

- Tighten nuts (2).

Exhaust system to body

M8	Replace nuts.	Tightening torque	19 Nm
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- Tighten down screw (1).

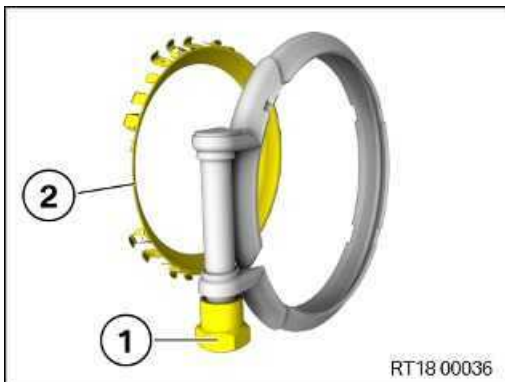
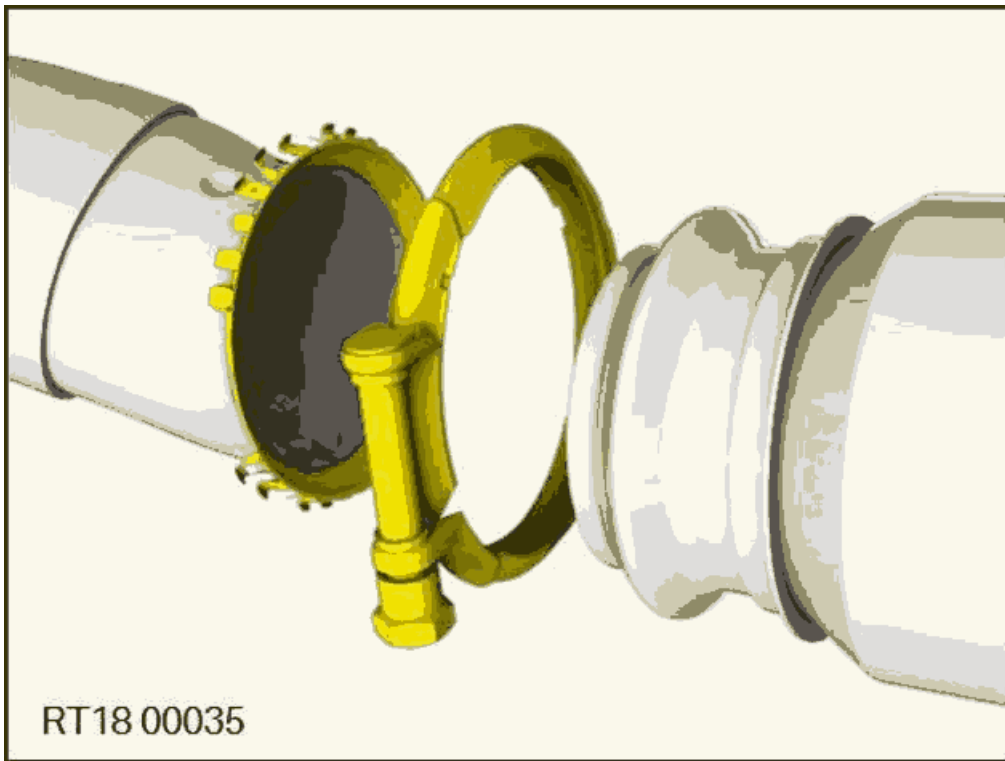
Exhaust bracket on body

Hexagon screw M8x30		Tightening torque	19 Nm
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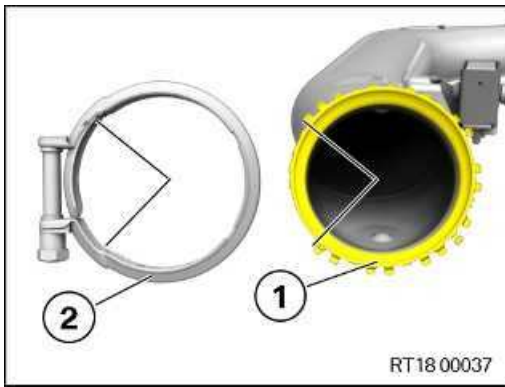
- Check the rubber mount (3) for damage and renew as needed.
- Mount rubber mount (3) on the exhaust system (4).

► Install the V-clip

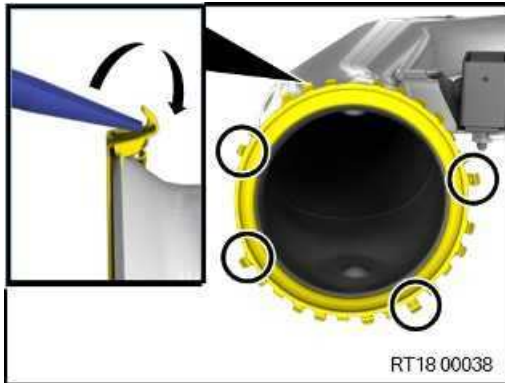
V-band clamp



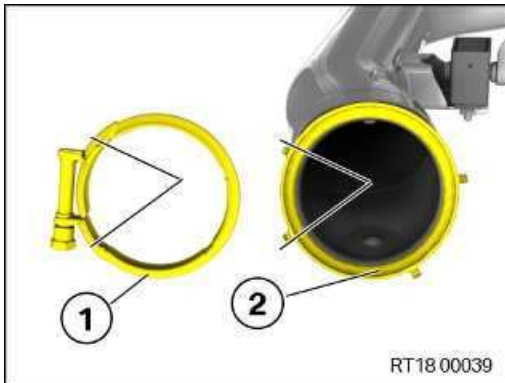
- Unscrew the nut (1) and remove the sealing ring (2).



- Renew the V-clip (2).
- Parts:** V-band clamp
- Mount the sealing ring (1) on the exhaust system.
- Ensure that the sealing ring (1) for the V-clip (2) is positioned correctly.



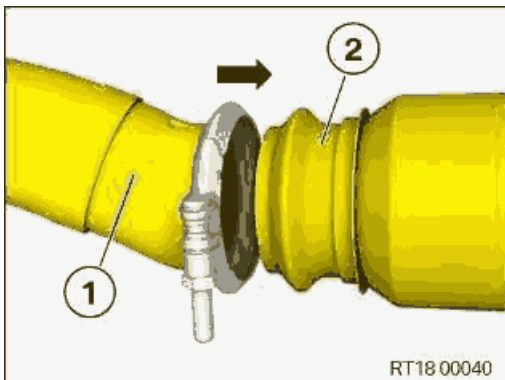
- Bend all sheet metal tabs over with a suitable tool, except those in the marked areas.



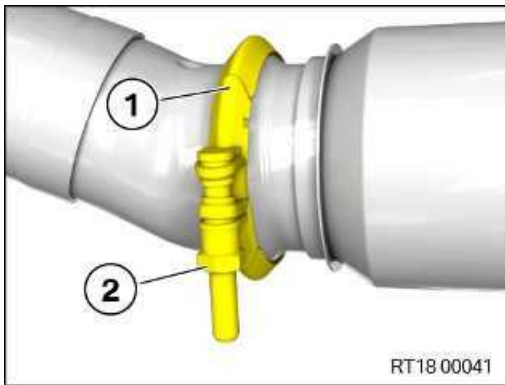
- Mount the V-clip (1) on the sealing ring (2).
- Make sure that the V-clip (1) is positioned correctly on the sealing ring (2).



- Make sure that the V-clip rests against the sheet metal tabs after mounting (marks).



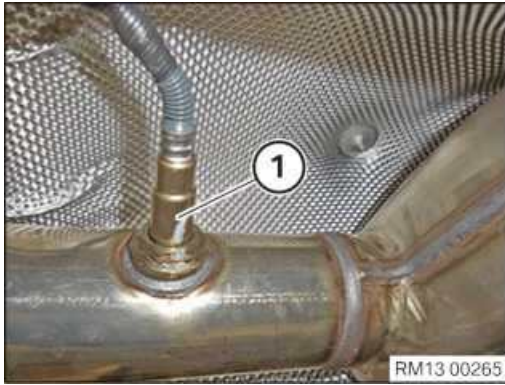
- Connect the exhaust system (1) with the catalytic converter (2) and position correctly.



- Make sure that V-clip (1) is fitted correctly.
- Tighten down screw (2).

V-clip to catalytic converter

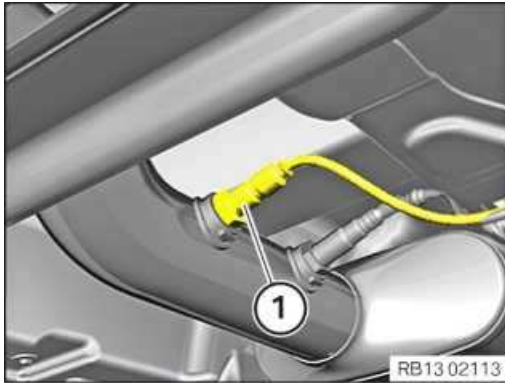
V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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- Feed in, install and tighten diesel particulate sensor (1).

Diesel particulate sensor to exhaust system

Sensor		Tightening torque	50 Nm
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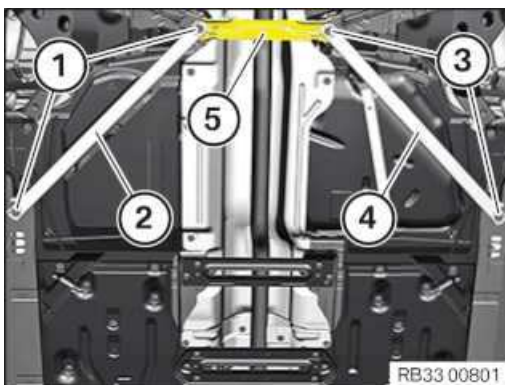


- Feed in, install and tighten nitrogen oxide sensor (1).

Nitrogen oxide sensor downstream of SCR catalytic converter

Sensor		Tightening torque	50 Nm
--------	--	-------------------	-------

14 – Install the cross-member with torsion struts



- Insert and install the cross-member (5).
- Thread in torsion strut (4) at right and install.
- Renew screws (3).
- Tighten down screws (3).

Parts: Bolts

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

- Guide in and install the left torsion strut (2).
- Renew screws (1).

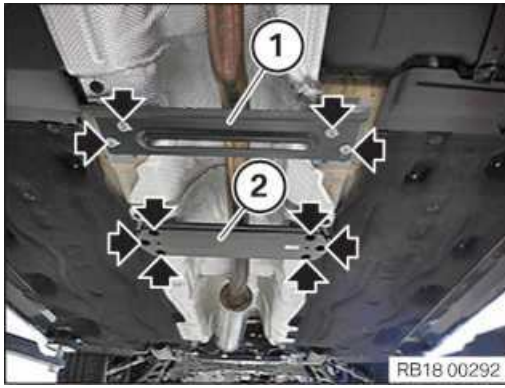
Parts: Bolts

- Tighten the screws (1).

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

15 – Install the connecting support on the tunnel in front and back



- Insert and install connecting supports (2).
- Tighten the screws (arrows) from the connecting support (2).

Front connection carrier to body

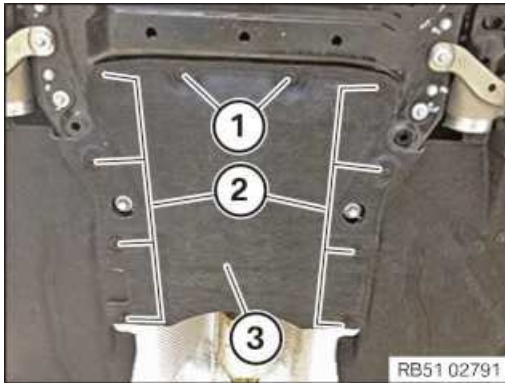
M10x18		Tightening torque	56 Nm
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- Insert and install connecting supports (1).
- Tighten the screws (arrows) from the connecting support (1).

Rear connection carrier to body

M8x18		Tightening torque	28 Nm
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16 – If installed: Installing underbody protection at rear



- Install the underbody protection (3).
- Tighten down screws (1) and (2).

Underbody protection to body

Screw		Tightening torque	3 Nm
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Additional Information

Overview of Tightening Torques

Propeller shaft to transfer box

Used in step 10

		Tightening torque	80 Nm
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Flexible disc to rear axle final drive

Used in step 10

M12x1.5	Renew screws.	Tightening torque	55 Nm 90 °
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Centre mount to body

Used in step 10

M8		Tightening torque	19 Nm
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Heat shield to body

Used in step 11 12

Bolts/nut		Tightening torque	3 Nm
-----------	--	-------------------	------

Bracket to body

Used in step 11

M8		Tightening torque	21 Nm
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Exhaust system to body

Used in step 13

M8	Replace nuts.	Tightening torque	19 Nm
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Exhaust bracket on body

Used in step 13

Hexagon screw M8x30		Tightening torque	19 Nm
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V-clip to catalytic converterUsed in step [13](#)

V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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Diesel particulate sensor to exhaust systemUsed in step [13](#)

Sensor		Tightening torque	50 Nm
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Nitrogen oxide sensor downstream of SCR catalytic converterUsed in step [13](#)

Sensor		Tightening torque	50 Nm
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Cross-member/torsion strut to axle support and mountingUsed in step [14](#)

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

Front connection carrier to bodyUsed in step [15](#)

M10x18		Tightening torque	56 Nm
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Rear connection carrier to bodyUsed in step [15](#)

M8x18		Tightening torque	28 Nm
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Underbody protection to bodyUsed in step [16](#)

Screw		Tightening torque	3 Nm
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Overview of Special Tools**0 495 554 (33 5 070) Extension****Common**Used in step [7](#) [10](#)

Usage	Pull-out extension for 33 5 040, 33 5 050, 33 5 060.
Included in the tool or work	
Storage location	A18
Replaced by	
In connection with	
SI-Number	01 21 06 (300)

Consisting of

Pos	BMW Order number	Replaced by	Designation	In Connection with
1	0 495 592 (33 5 071)		Extension (Extension (1 item)) discontinued, can only be ordered using complete tool	

2 450 247 Puller

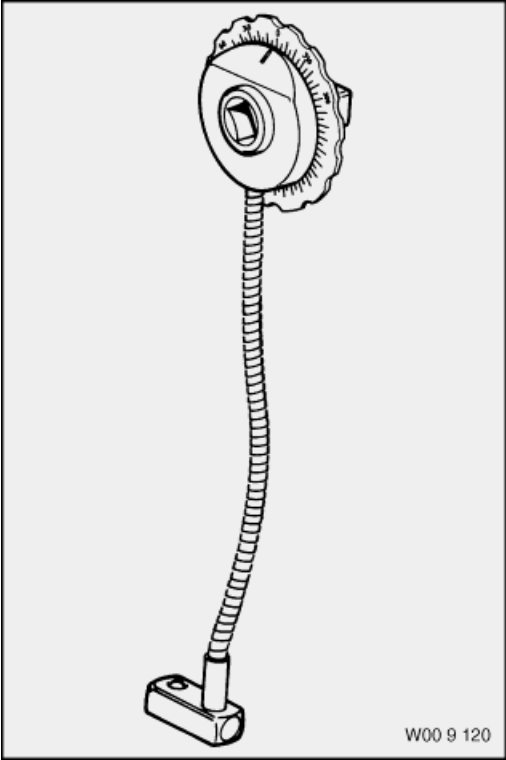


Common

Used in step 8

Usage	Tool for the disassembly of the front and right centring / guide sleeve for propeller shafts
Included in the tool or work	
Storage location	B5
Replaced by	
In connection with	
SI-Number	01 11 17 (494)

0 490 504 (00 9 120) Torque angle measuring dial



Common

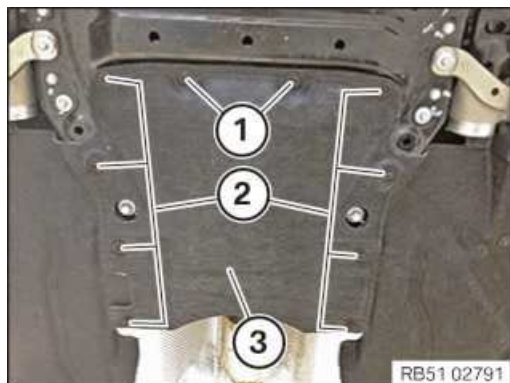
Used in step 10

Usage	For torsion angle adjustment of cylinder head bolts (all engines) And reinforcement plate front axle support E46
Included in the tool or work	
Storage location	A4
Replaced by	
In connection with	
SI-Number	

26 11 052 Replacing flexible disc for rear propeller shaft

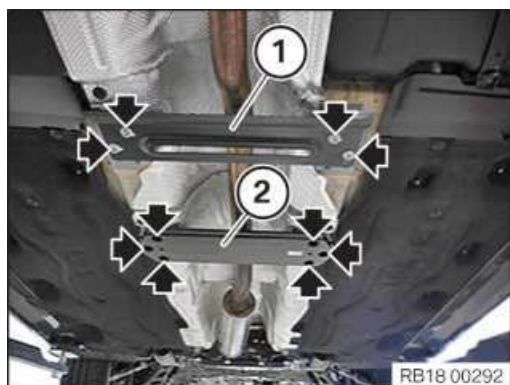
PRELIMINARY WORK

1 – If installed: Removing rear underbody protection



- Loosen screws (1) and (2).
- Remove underbody protection (3).

2 – Removing the connecting support from the tunnel in front and back



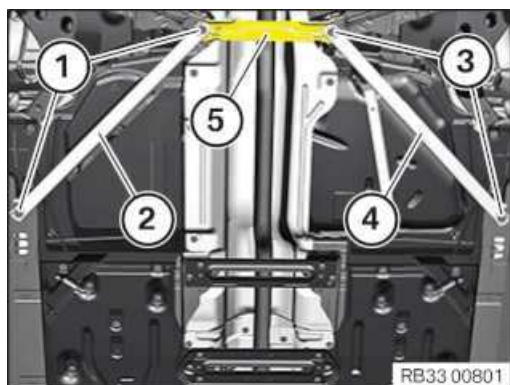
- Unscrew the bolts (arrows) from the connecting support (1).
- Feed out and remove the crossbeam (1).
- Unscrew the bolts (arrows) from the connecting support (2).
- Feed out and remove the crossbeam (2).

3 – Remove the cross strut with the torsion strut



TECHNICAL INFORMATION

Driving without a torsion strut is not permitted.



- Loosen screws (1).
- Thread out torsion strut (2) at left and remove.
- Loosen screws (3).
- Thread out torsion strut (4) at right and remove.
- Feed out and remove the cross-member (5).

4 – Remove exhaust system



WARNING

Hot surfaces.

Risk of burning!

- Perform all work only on components that have cooled down.

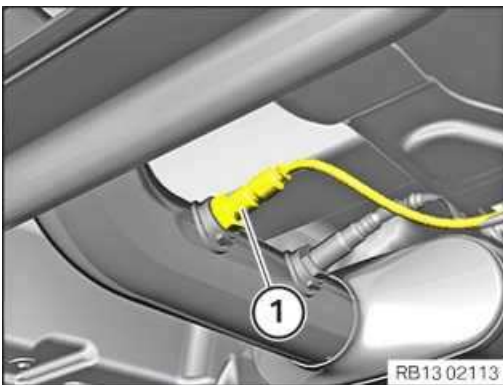


CAUTION

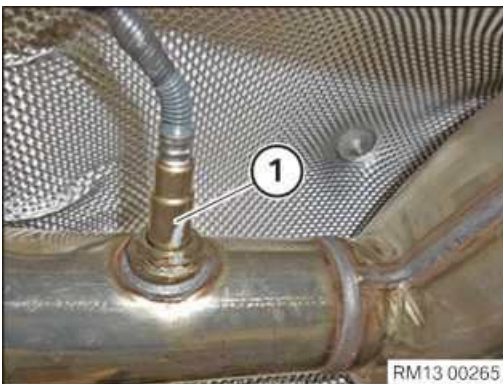
Heavy component.

Heavy components can lead to injury or damage.

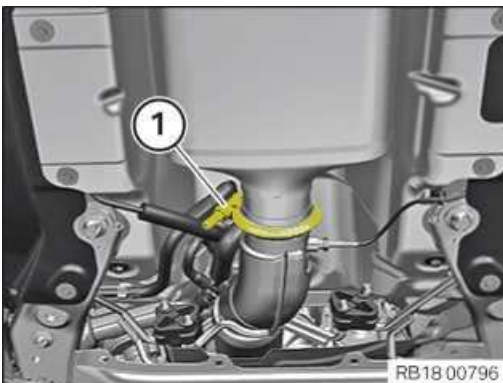
- Remove and install heavy components with the aid of another person/other persons.



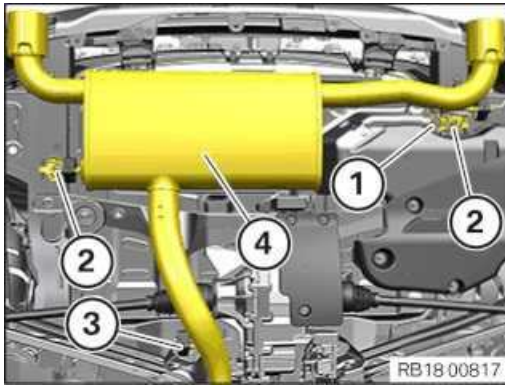
- Release the nitrogen oxide sensor (1) downstream of the SCR catalytic converter, guide it out and set it aside.



- Release the diesel particulate sensor (1), guide it out and set it aside.

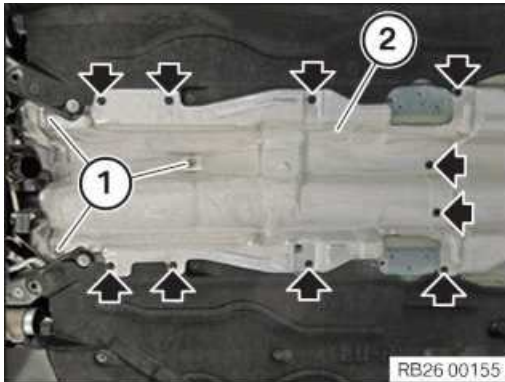


- Loosen V-band clamp (1).



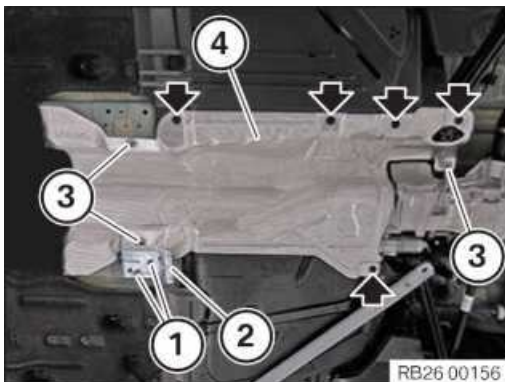
- Loosen screw (1).
- Loosen nuts (2).
- Release the rubber mount (3) of the exhaust system (4).
- Lower and guide out the exhaust system (4) with assistance of a second person and remove it.

5 – Remove front heat shield



- Remove screws (arrows).
- Loosen nuts (1).
- Guide the heat shield (2) out and remove it.

6 – Remove heat shield at rear.



- Loosen screws (1).
- Guide out and remove holder (2).
- Remove screws (arrows).
- Loosen nuts (3).
- Guide the heat shield (4) out and remove it.

MAIN WORK

7 – Removing the flexible disc for the rear propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.

TECHNICAL INFORMATION

The rear part of the propeller shaft must not hang freely, otherwise the gaiter of the propeller shaft centre bearing will be damaged.

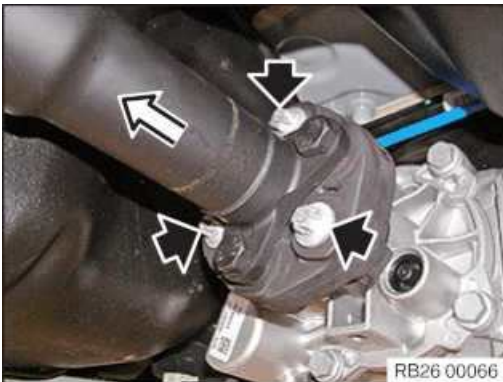
It is mandatory to support the propeller shaft with a lever around the centre mount to protect joints.



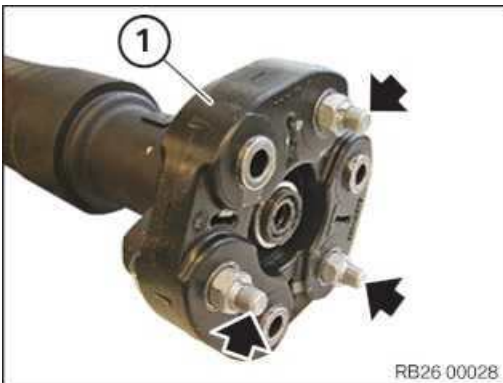
- Always support the propeller shaft (1) with a conventional jack.



- Loosen screws (1).



- Remove screws (arrows).
- Push the propeller shaft towards the front and remove from the rear axle differential.



- Release the screws (arrows) and remove the flexible disc (1) from the propeller shaft.

8 – Installing the flexible disc for the rear propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



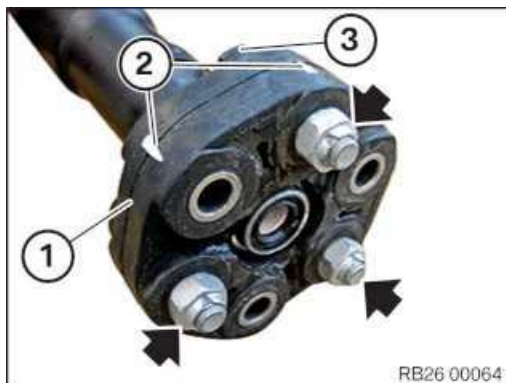
TECHNICAL INFORMATION

The rear part of the propeller shaft must not hang freely, otherwise the gaiter of the propeller shaft centre bearing will be damaged.

It is mandatory to support the propeller shaft with a lever around the centre mount to protect joints.



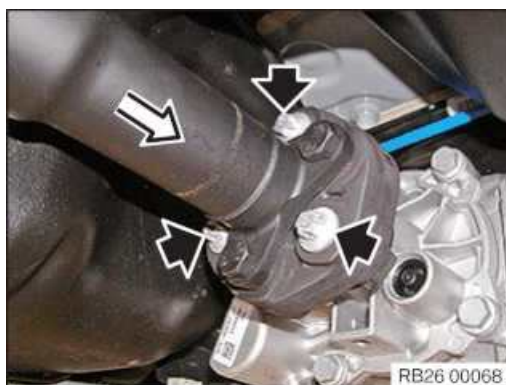
- Check centering (arrow).
- Replace damaged centring mount.



- During installation the arrows (2) on the circumference of the flexible disc must point to the flange arms (3).
 - Install the flexible disc (1).
 - Renew ZNS screws and self-locking nuts.
- Parts:** ZNS screws and self-locking nuts
- Fit and tighten nuts and bolts.

Flexible disc, rear, to propeller shaft

M12x1.5	Renew screws and nuts.	Jointing torque	55 Nm
		Angle of rotation	90 °



- Install propeller shaft and push towards the front.
 - Renew the bolts (arrows).
- Parts:** Bolts
- Insert screws and tighten.

Rear flexible disc to rear axle final drive

M12x1.5	Renew screws.	Jointing torque	55 Nm
		Angle of rotation	90 °



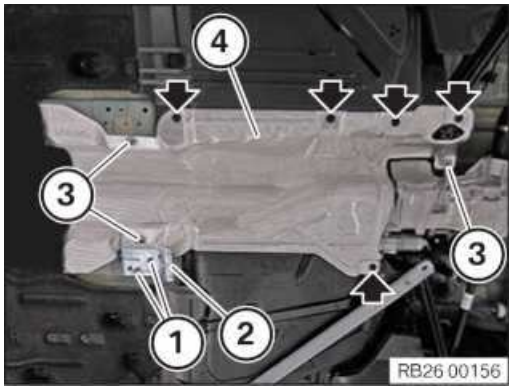
- Install centre mount.
- Tabs (1) must point down during installation.
- Tighten screws (arrows).

Centre mount to body

		Tightening torque	19 Nm
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POSTPROCESSES

9 – Installing the rear heat shield



- Insert and install the heat shield (4).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (3).

Heat shield to body

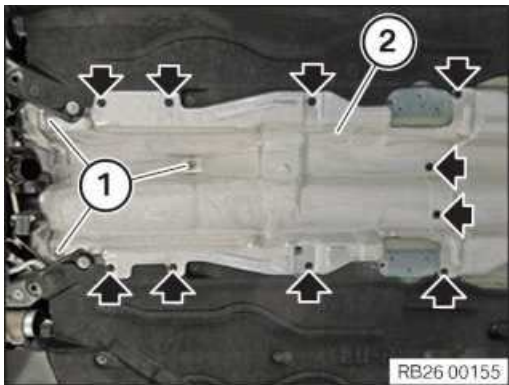
Bolts/nut		Tightening torque	3 Nm
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- Insert and install the holder (2).
- Tighten the screws (1).

Bracket to body

M8		Tightening torque	21 Nm
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10 – Install the front heat shield



- Insert and install the heat shield (2).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (1).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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11 – Install exhaust system



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.

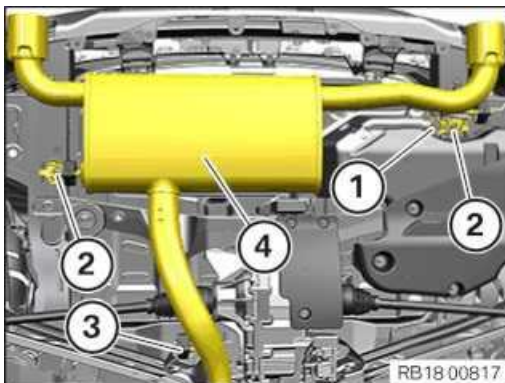


CAUTION

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.



- Feed in and install the exhaust system (4) with a second person.
- Renew nuts (2).

Parts: Nuts

- Tighten nuts (2).

Exhaust system to body

M8	Replace nuts.	Tightening torque	19 Nm
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- Tighten down screw (1).

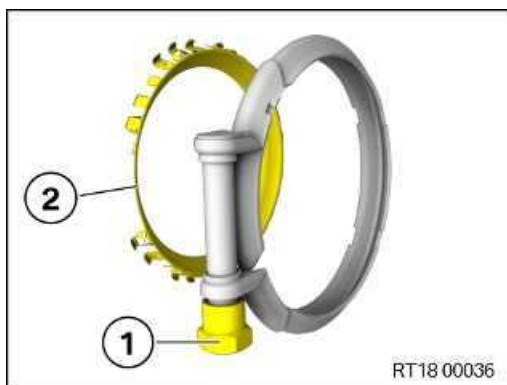
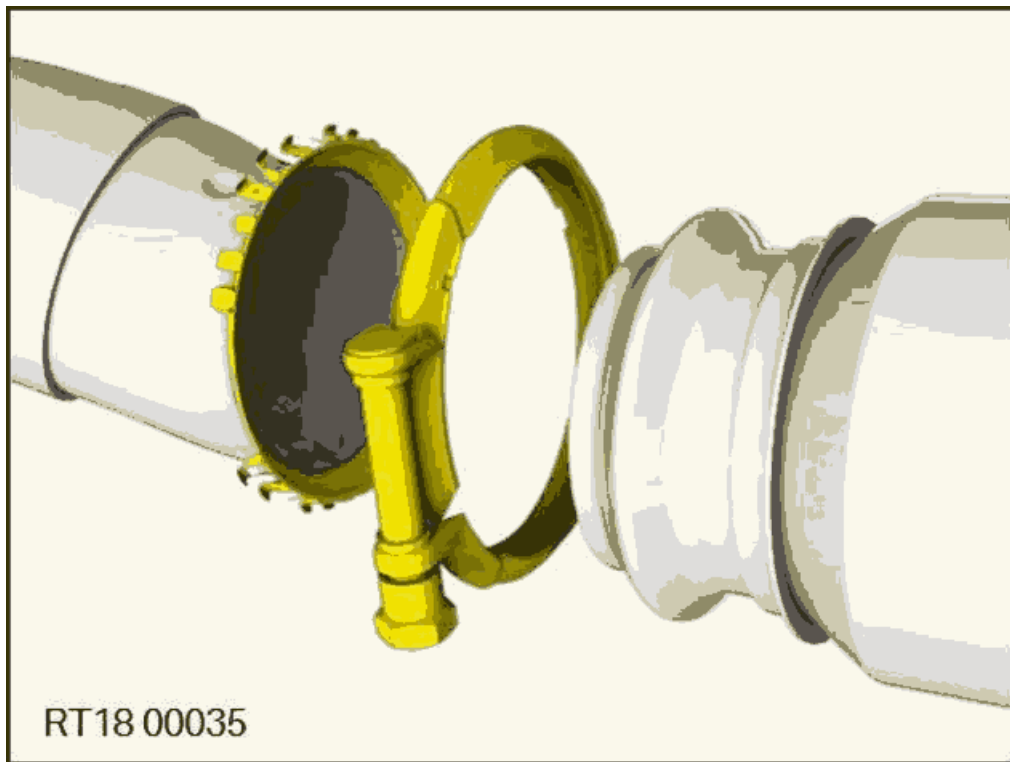
Exhaust bracket on body

Hexagon screw M8x30		Tightening torque	19 Nm
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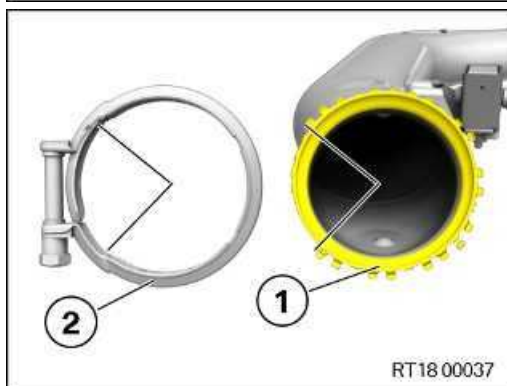
- Check the rubber mount (3) for damage and renew as needed.
- Mount rubber mount (3) on the exhaust system (4).

► **Install the V-clip**

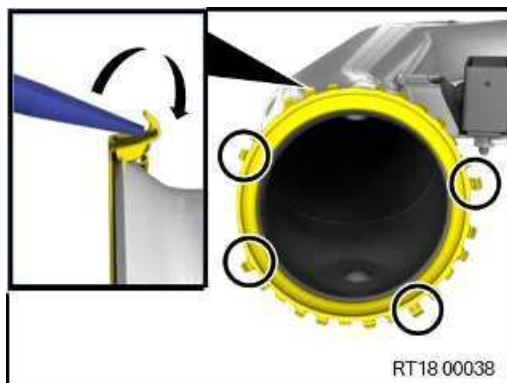
V-band clamp



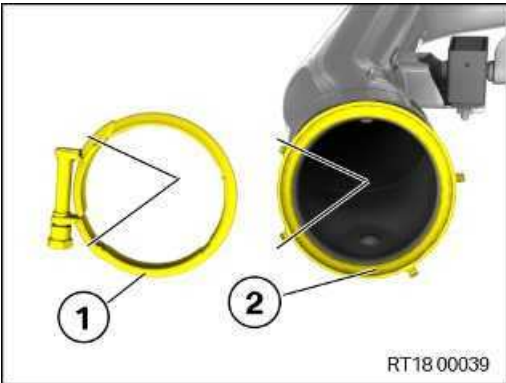
- Unscrew the nut (1) and remove the sealing ring (2).



- Renew the V-clip (2).
- **Parts:** V-band clamp
- Mount the sealing ring (1) on the exhaust system.
- Ensure that the sealing ring (1) for the V-clip (2) is positioned correctly.



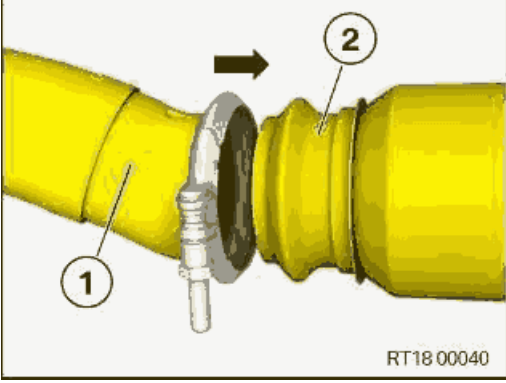
- Bend all sheet metal tabs over with a suitable tool, except those in the marked areas.



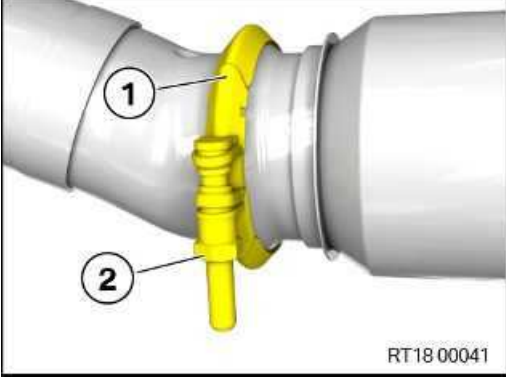
- Mount the V-clip (1) on the sealing ring (2).
- Make sure that the V-clip (1) is positioned correctly on the sealing ring (2).



- Make sure that the V-clip rests against the sheet metal tabs after mounting (marks).



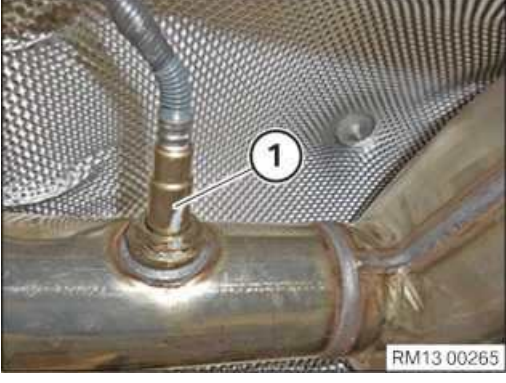
- Connect the exhaust system (1) with the catalytic converter (2) and position correctly.



- Make sure that V-clip (1) is fitted correctly.
- Tighten down screw (2).

V-clip to catalytic converter

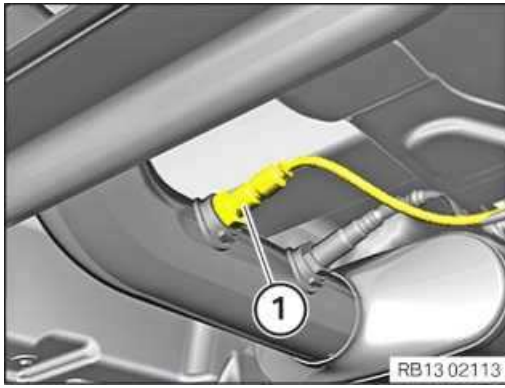
V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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- Feed in, install and tighten diesel particulate sensor (1).

Diesel particulate sensor to exhaust system

Sensor		Tightening torque	50 Nm
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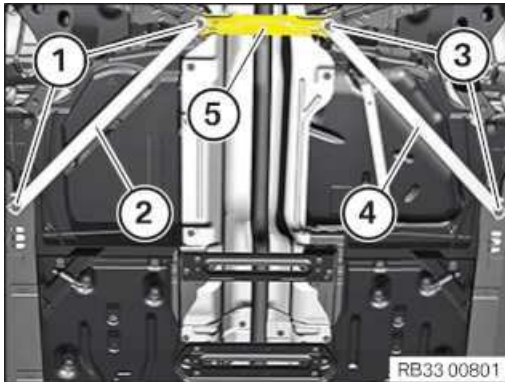


- Feed in, install and tighten nitrogen oxide sensor (1).

Nitrogen oxide sensor downstream of SCR catalytic converter

Sensor		Tightening torque	50 Nm
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12 – Install the cross-member with torsion struts



- Insert and install the cross-member (5).
- Thread in torsion strut (4) at right and install.
- Renew screws (3).
- Parts:** Bolts
- Tighten down screws (3).

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

- Guide in and install the left torsion strut (2).
- Renew screws (1).

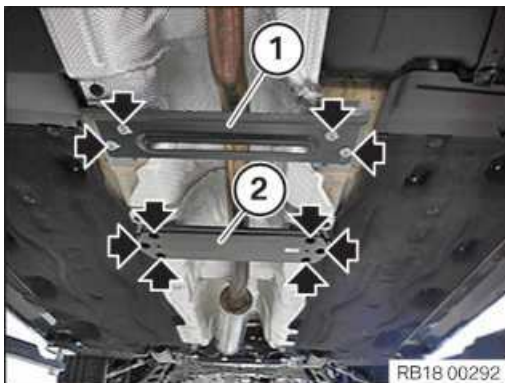
Parts: Bolts

- Tighten the screws (1).

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

13 – Install the connecting support on the tunnel in front and back



- Insert and install connecting supports (2).
- Tighten the screws (arrows) from the connecting support (2).

Front connection carrier to body

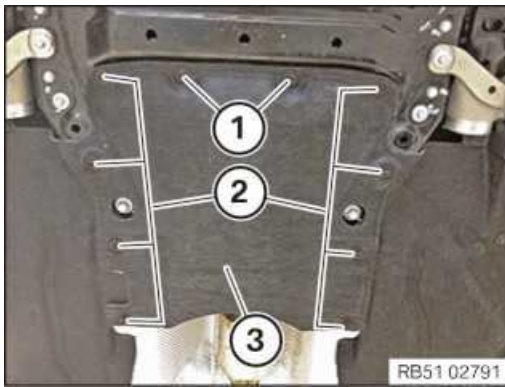
M10x18		Tightening torque	56 Nm
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- Insert and install connecting supports (1).
- Tighten the screws (arrows) from the connecting support (1).

Rear connection carrier to body

M8x18		Tightening torque	28 Nm
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14 – If installed: Installing underbody protection at rear



- Install the underbody protection (3).
- Tighten down screws (1) and (2).

Underbody protection to body

Screw		Tightening torque	3 Nm
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Additional Information

Overview of Tightening Torques

Flexible disc, rear, to propeller shaft

Used in step [8](#)

M12x1.5	Renew screws and nuts.	Jointing torque	55 Nm
		Angle of rotation	90 °

Rear flexible disc to rear axle final drive

Used in step [8](#)

M12x1.5	Renew screws.	Jointing torque	55 Nm
		Angle of rotation	90 °

Centre mount to body

Used in step [8](#)

		Tightening torque	19 Nm
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Heat shield to body

Used in step [9](#) [10](#)

Bolts/nut		Tightening torque	3 Nm
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Bracket to body

Used in step [9](#)

M8		Tightening torque	21 Nm
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Exhaust system to body

Used in step [11](#)

M8	Replace nuts.	Tightening torque	19 Nm
----	---------------	-------------------	-------

Exhaust bracket on body

Used in step [11](#)

Hexagon screw M8x30		Tightening torque	19 Nm
---------------------	--	-------------------	-------

V-clip to catalytic converter

Used in step [11](#)

V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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Diesel particulate sensor to exhaust system

Used in step [11](#)

Sensor		Tightening torque	50 Nm
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Nitrogen oxide sensor downstream of SCR catalytic converter

Used in step [11](#)

Sensor		Tightening torque	50 Nm
--------	--	-------------------	-------

Cross-member/torsion strut to axle support and mounting

Used in step [12](#)

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

Front connection carrier to body

Used in step 13

M10x18		Tightening torque	56 Nm
--------	--	-------------------	-------

Rear connection carrier to body

Used in step 13

M8x18		Tightening torque	28 Nm
-------	--	-------------------	-------

Underbody protection to body

Used in step 14

Screw		Tightening torque	3 Nm
-------	--	-------------------	------

26 12 001 Replacing complete propeller shaft centre bearing



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

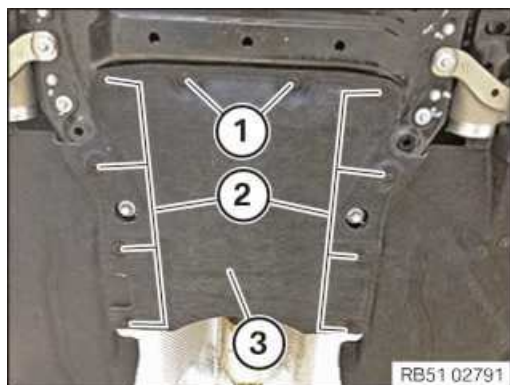
Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.

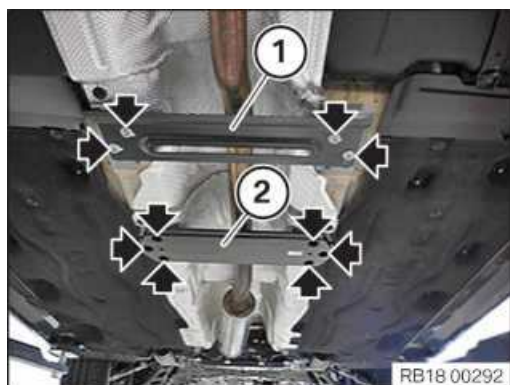
PRELIMINARY WORK

1 – If installed: Removing rear underbody protection



- Loosen screws (1) and (2).
- Remove underbody protection (3).

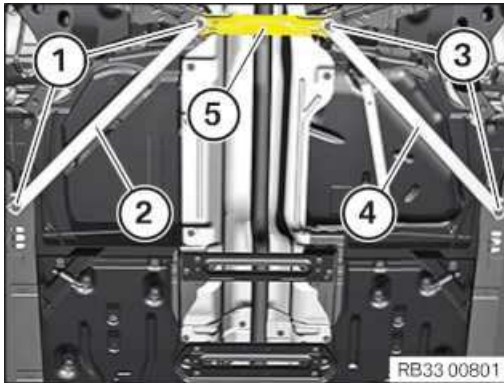
2 – Removing the connecting support from the tunnel in front and back



- Unscrew the bolts (arrows) from the connecting support (1).
- Feed out and remove the crossbeam (1).
- Unscrew the bolts (arrows) from the connecting support (2).
- Feed out and remove the crossbeam (2).

3 – Remove the cross strut with the torsion strut

Driving without a torsion strut is not permitted.



- Loosen screws (1).
- Thread out torsion strut (2) at left and remove.
- Loosen screws (3).
- Thread out torsion strut (4) at right and remove.
- Feed out and remove the cross-member (5).

4 – Remove exhaust system



WARNING

Hot surfaces.

Risk of burning!

- Perform all work only on components that have cooled down.

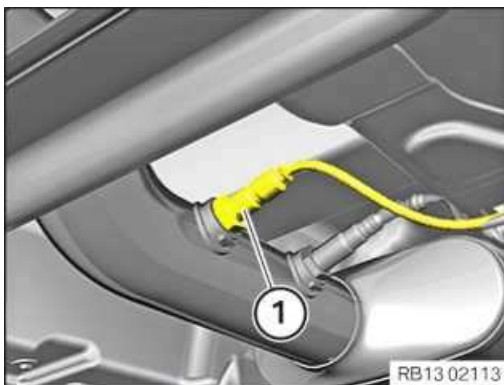


CAUTION

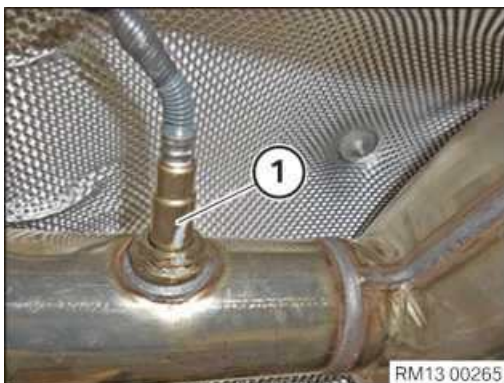
Heavy component.

Heavy components can lead to injury or damage.

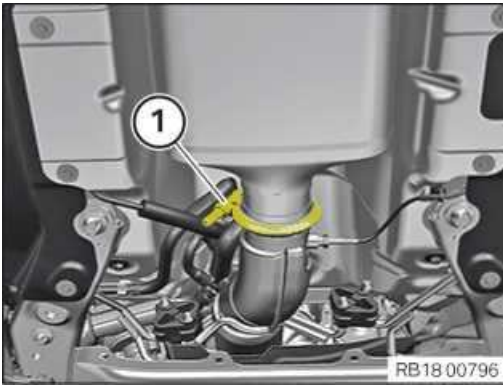
- Remove and install heavy components with the aid of another person/other persons.



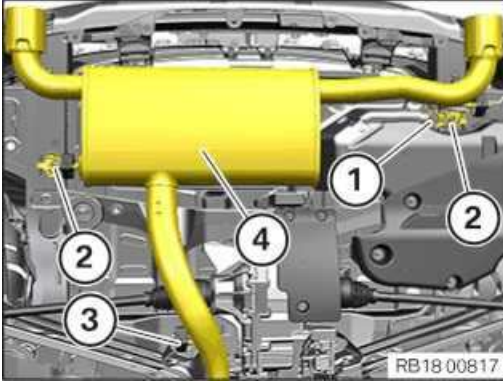
- Release the nitrogen oxide sensor (1) downstream of the SCR catalytic converter, guide it out and set it aside.



- Release the diesel particulate sensor (1), guide it out and set it aside.

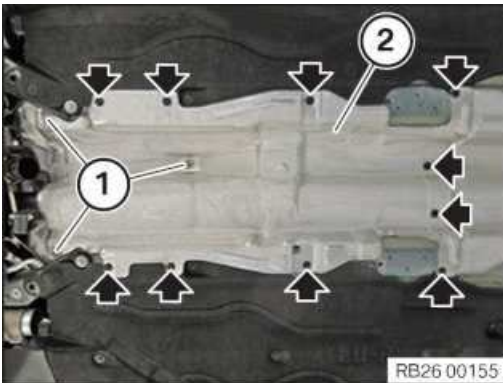


- Loosen V-band clamp (1).



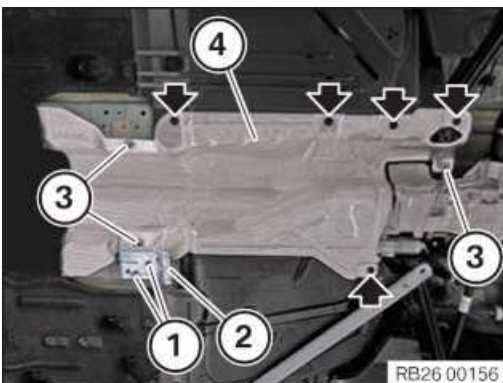
- Loosen screw (1).
- Loosen nuts (2).
- Release the rubber mount (3) of the exhaust system (4).
- Lower and guide out the exhaust system (4) with assistance of a second person and remove it.

5 – Remove front heat shield



- Remove screws (arrows).
- Loosen nuts (1).
- Guide the heat shield (2) out and remove it.

6 – Remove heat shield at rear.



- Loosen screws (1).
- Guide out and remove holder (2).
- Remove screws (arrows).
- Loosen nuts (3).
- Guide the heat shield (4) out and remove it.

7 – Remove propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

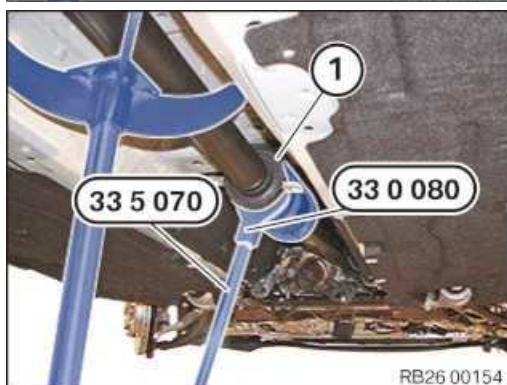
- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.



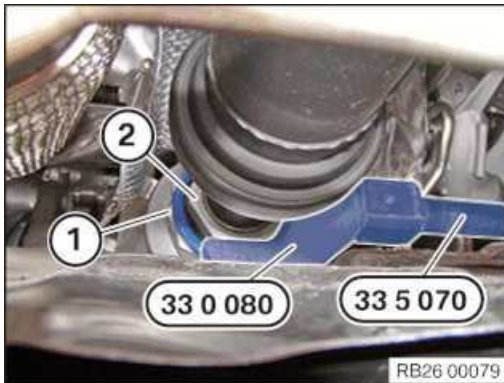
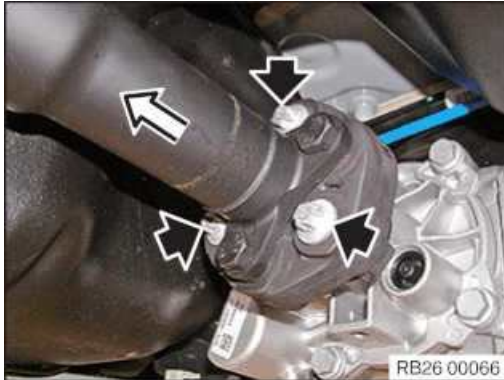
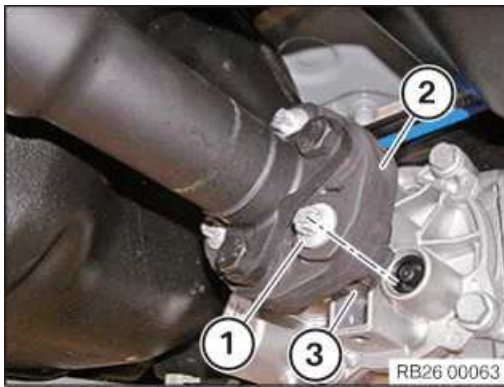
- Install the special tool between the front and rear propeller shaft.
- Make sure that the arrows on the special tool point forward in the direction of travel.



- Always support the propeller shaft (1) with a conventional jack.



- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.



TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Mark the installation position of the screw connection (1), the flexible disc (2) and the three-hole flange (3) on the same level.
- Loosen the screw connection (1).
- Loosen screws (1).
- Remove screws (arrows).
- Guide the propeller shaft out in the direction of the arrow and set it aside.



RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

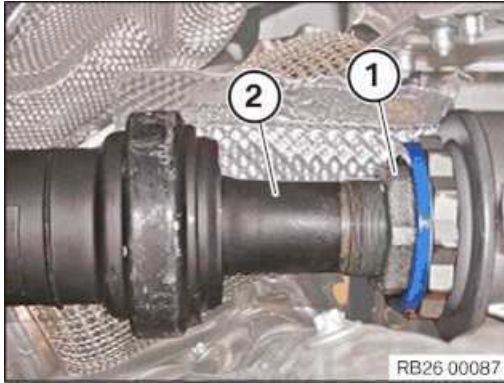
- Do not use the double hexagon head flange nut as counter support.
- Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .

The recessed nut (2) on the transfer box must **not** be used to detach the propeller shaft.

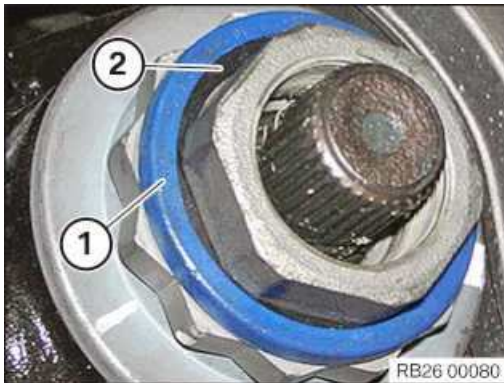
The double hexagon flange nut (1) must **not** be used for counter support.



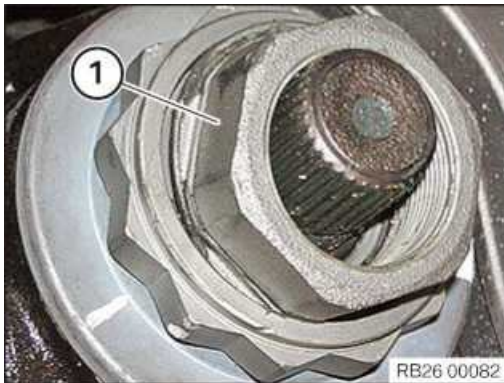
- Release the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.



- Thread the propeller shaft (2) out of the recessed nut (1) and remove.



- Thread the retaining clip (1) and the seal (2) out and remove.



- Thread out and remove the recessed nut (1).

MAIN WORK

8 – Removing the propeller shaft centre bearing



CAUTION

Component with heavy weight.

Danger of injury!

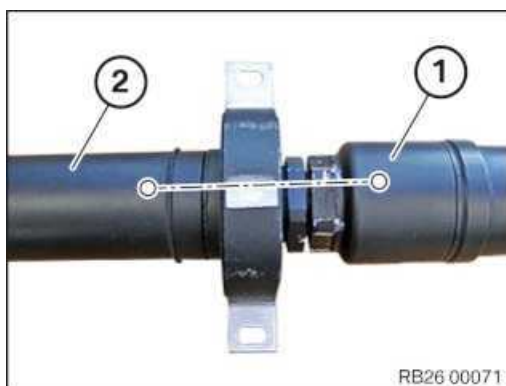
- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



TECHNICAL INFORMATION

The rear part of the propeller shaft must not hang freely, otherwise the gaiter of the propeller shaft centre bearing will be damaged.

It is mandatory to support the propeller shaft with a lever around the centre mount to protect joints.

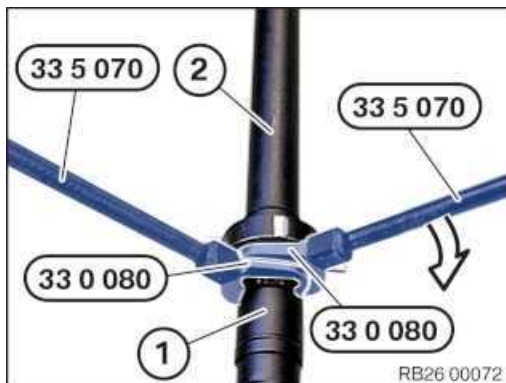


TECHNICAL INFORMATION

The propeller shaft is balanced.

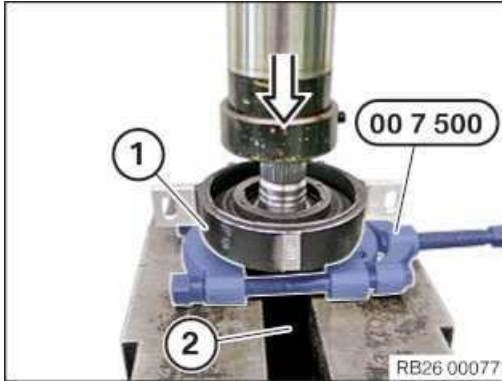
The front and rear propeller shaft must be re-assembled in the same installation position.

- Mark the alignment of the front propeller shaft (1) and the rear propeller shaft (2) in one plane.
- Hold the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and .
- Release the nut of the propeller shaft (2) with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.
- Pull the front propeller shaft and the rear propeller shaft apart in the direction of arrow.



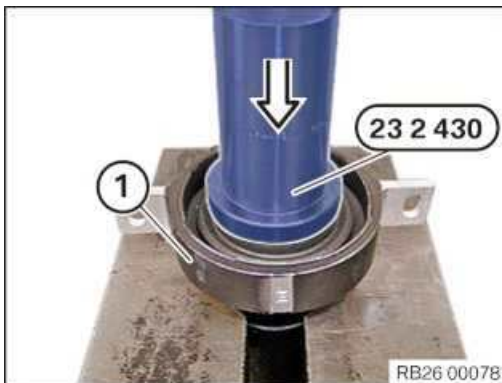


- Remove the sealing ring (1), the circlip (2) and flange nut (3).



- Install the special tool between the centre mount (1) and the propeller shaft (2).
- Press the centre mount (1) of the propeller shaft (2) shut with the hydraulic press.

9 – Install propeller shaft centre bearing



- Renew the centre mount (1).
- Parts:** Centre mount
- Slide the centre mount (1) onto the grooved ball bearing and press with the special tool 0 491 591 (23 2 430) in the direction of arrow.



- Renew the flange nut (3), locking ring (2) and the sealing ring (1).
- Parts:** Flange nut, circlip and sealing ring
- Install the flange nut (3), locking ring (2) and the sealing ring (1).



- Screw the front and rear propeller shaft together in the direction of arrow and tighten it.

10 – Install propeller shaft.



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to the propeller shaft during installation.

Non-observance of the installation guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Always renew the recessed nut on the rear axle differential. Screw locking must be available.
- Strictly observe a minimum hardening time of two hours after having screwed in the recessed nut. The hardening time may be longer at lower temperatures.

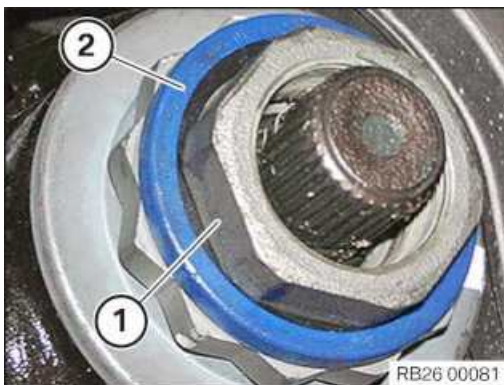


RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.



- Renew recessed nut (1).

Parts: Insert nut

- Renew the retaining clip (2) and the seal.

Parts: Retaining clip, seal

- Insert the seal with the recessed nut (1) and install.
- Insert the retaining clip (2) and install.
- Make sure that recessed nut (1) is screwed in within 5 min.
- Make sure that the hardening time of **minimum 2 h** for the recessed nut is observed.

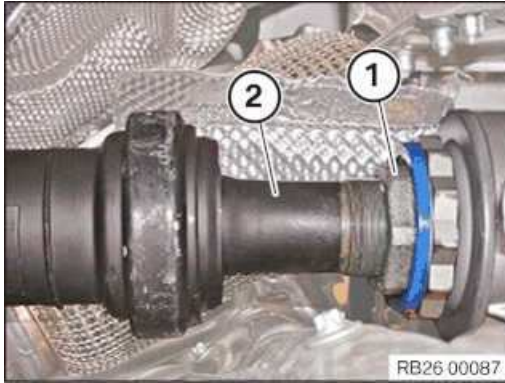
The hardening time must be extended at lower temperatures.



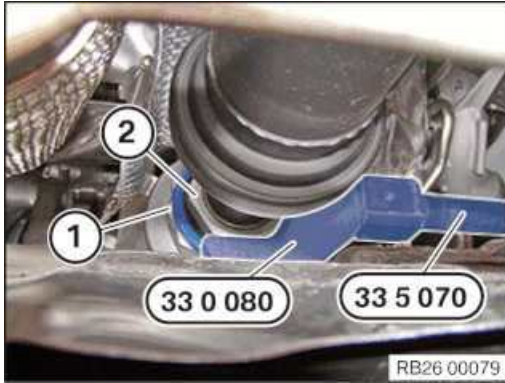
- Insert the propeller shaft (1) and install.
- Always support the propeller shaft (1) with a conventional jack.



- Hand-tighten the bolts (1).



- Push the propeller shaft (2) against the recessed nut (1) up to the limit position.
- Screw the propeller shaft (2) at least 2 thread starts onto the recessed nut (1) by hand.

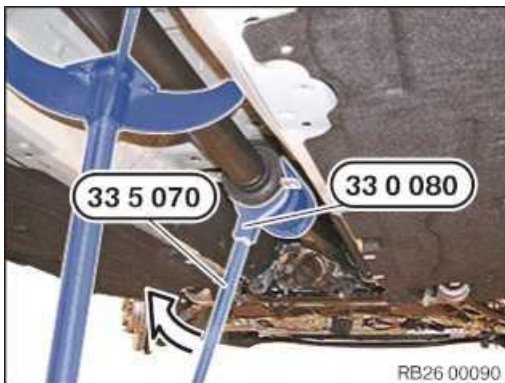


RISK OF DAMAGE

Damage to the transfer box.

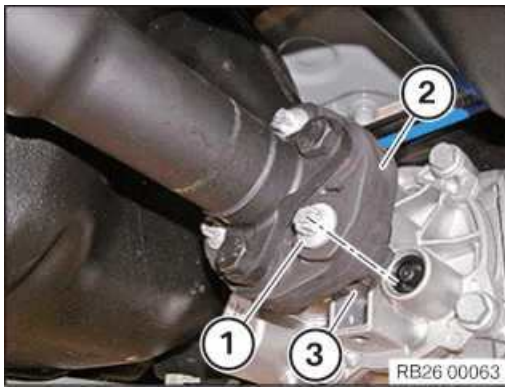
Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.
 - Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .
- The recessed nut (2) on the transfer box must **not** be used to tighten the propeller shaft.
- The double hexagon flange nut (1) must **not** be used for counter support.
- Tighten the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.



Propeller shaft to transfer box

		Tightening torque	80 Nm
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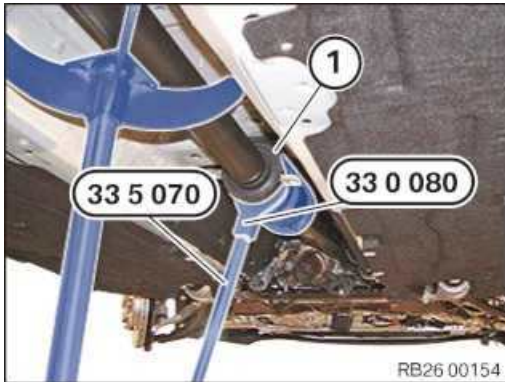
TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Assemble the screw connection (1) of the flexible disc (2) and the three-hole flange (3) according to the mark.
- Renew screws (1).

Parts: Bolts

- Hand-tighten the bolts (1).
- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.



- Tighten the bolts with the special tools **0 490 504 (00 9 120)** and .

Flexible disc to rear axle final drive

M12x1.5	Renew screws.	Tightening torque	55 Nm
			90 °



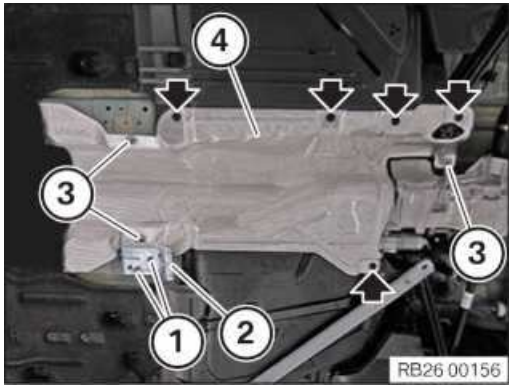
- Tighten the screws (1).

Centre mount to body

M8		Tightening torque	19 Nm
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- Guide the special tool out between the front and rear propeller shaft and remove.



- Insert and install the heat shield (4).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (3).

Heat shield to body

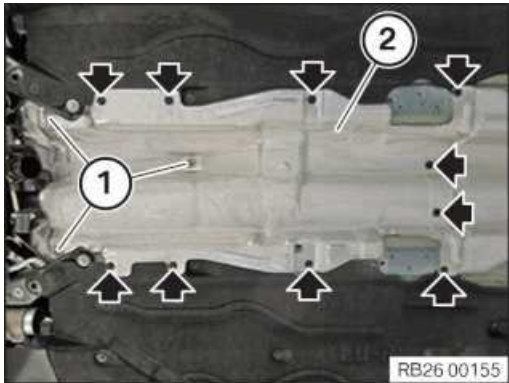
Bolts/nut		Tightening torque	3 Nm
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- Insert and install the holder (2).
- Tighten the screws (1).

Bracket to body

M8		Tightening torque	21 Nm
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12 – Install the front heat shield



- Insert and install the heat shield (2).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (1).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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13 – Install exhaust system



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.

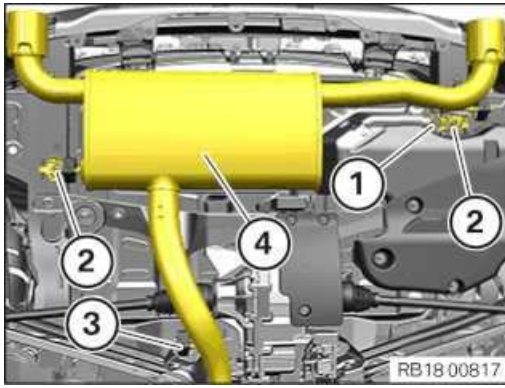


CAUTION

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.



- Feed in and install the exhaust system (4) with a second person.
- Renew nuts (2).

Parts: Nuts

- Tighten nuts (2).

Exhaust system to body

M8	Replace nuts.	Tightening torque	19 Nm
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- Tighten down screw (1).

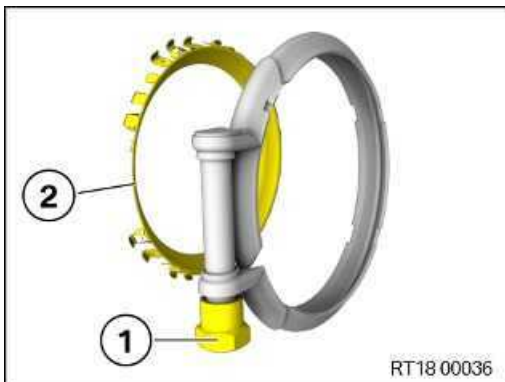
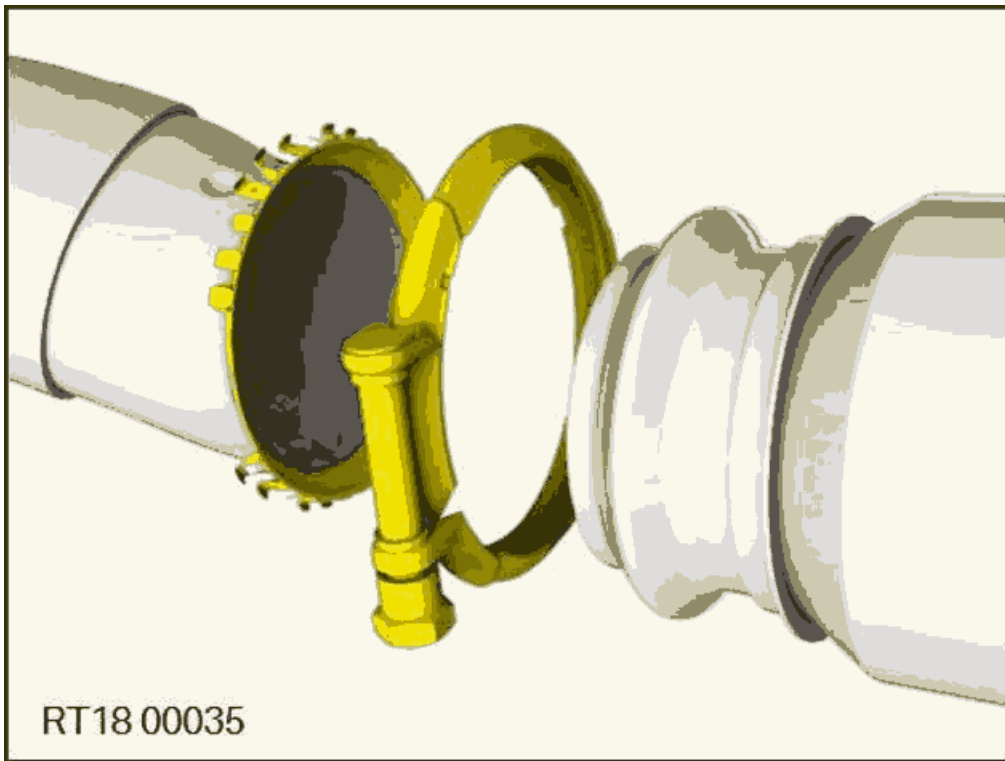
Exhaust bracket on body

Hexagon screw M8x30		Tightening torque	19 Nm
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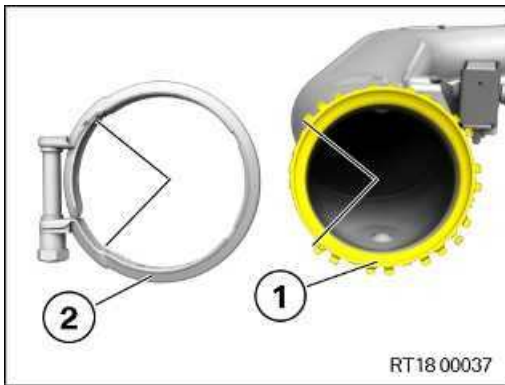
- Check the rubber mount (3) for damage and renew as needed.
- Mount rubber mount (3) on the exhaust system (4).

► Install the V-clip

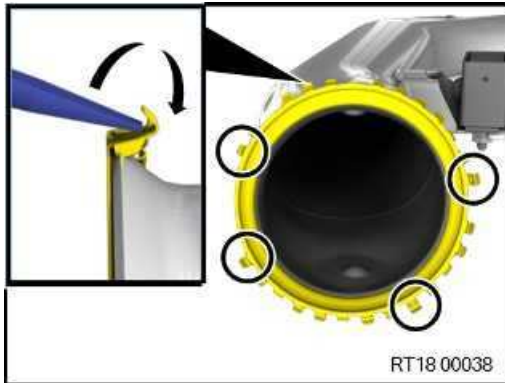
V-band clamp



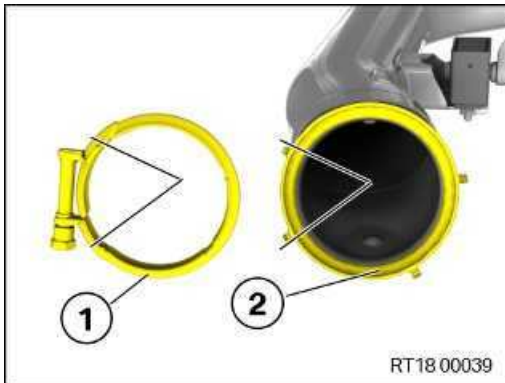
- Unscrew the nut (1) and remove the sealing ring (2).



- Renew the V-clip (2).
- Parts:** V-band clamp
- Mount the sealing ring (1) on the exhaust system.
- Ensure that the sealing ring (1) for the V-clip (2) is positioned correctly.



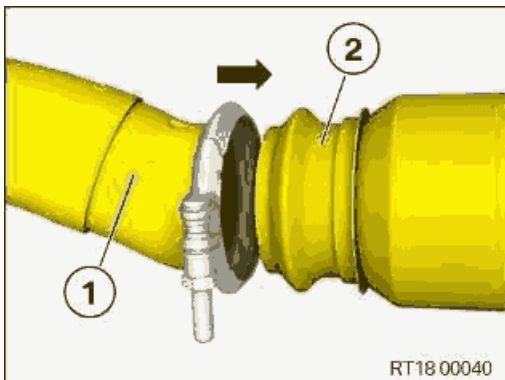
- Bend all sheet metal tabs over with a suitable tool, except those in the marked areas.



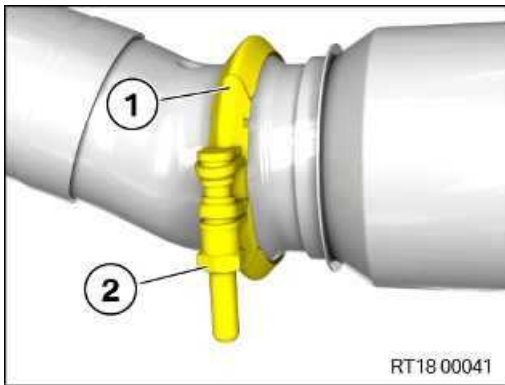
- Mount the V-clip (1) on the sealing ring (2).
- Make sure that the V-clip (1) is positioned correctly on the sealing ring (2).



- Make sure that the V-clip rests against the sheet metal tabs after mounting (marks).



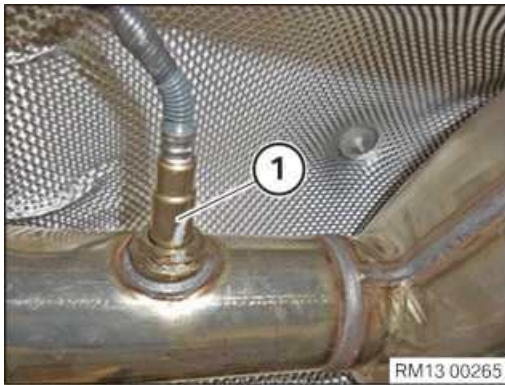
- Connect the exhaust system (1) with the catalytic converter (2) and position correctly.



- Make sure that V-clip (1) is fitted correctly.
- Tighten down screw (2).

V-clip to catalytic converter

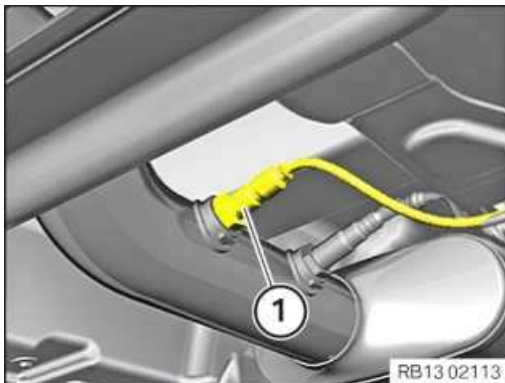
V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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- Feed in, install and tighten diesel particulate sensor (1).

Diesel particulate sensor to exhaust system

Sensor		Tightening torque	50 Nm
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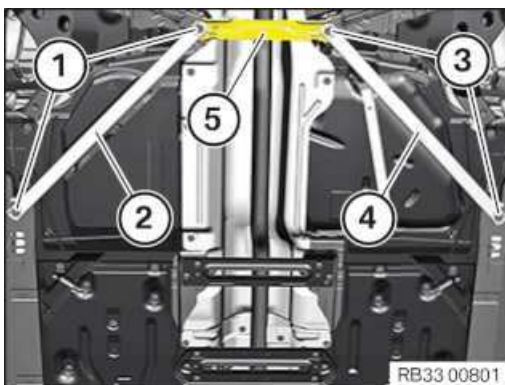


- Feed in, install and tighten nitrogen oxide sensor (1).

Nitrogen oxide sensor downstream of SCR catalytic converter

Sensor		Tightening torque	50 Nm
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14 – Install the cross-member with torsion struts



- Insert and install the cross-member (5).
- Thread in torsion strut (4) at right and install.
- Renew screws (3).
- Tighten down screws (3).

Parts: Bolts

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

- Guide in and install the left torsion strut (2).
- Renew screws (1).

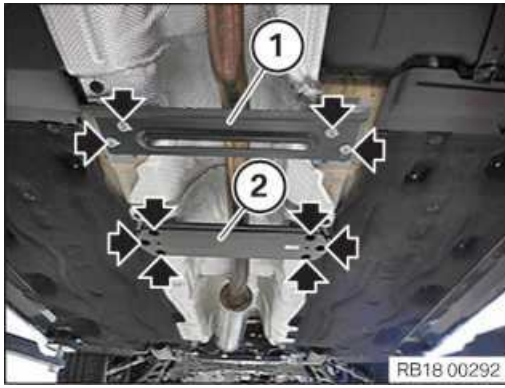
Parts: Bolts

- Tighten the screws (1).

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

15 – Install the connecting support on the tunnel in front and back



- Insert and install connecting supports (2).
- Tighten the screws (arrows) from the connecting support (2).

Front connection carrier to body

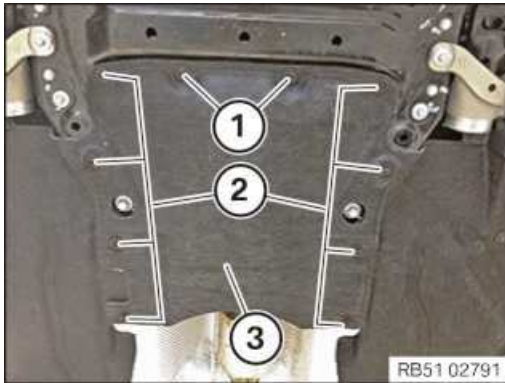
M10x18		Tightening torque	56 Nm
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- Insert and install connecting supports (1).
- Tighten the screws (arrows) from the connecting support (1).

Rear connection carrier to body

M8x18		Tightening torque	28 Nm
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16 – If installed: Installing underbody protection at rear



- Install the underbody protection (3).
- Tighten down screws (1) and (2).

Underbody protection to body

Screw		Tightening torque	3 Nm
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Additional Information

Overview of Tightening Torques

Propeller shaft to transfer box			Used in step	10
		Tightening torque		80 Nm
Flexible disc to rear axle final drive			Used in step	10
M12x1.5	Renew screws.	Tightening torque		55 Nm 90 °
Centre mount to body			Used in step	10
M8		Tightening torque		19 Nm
Heat shield to body			Used in step	11 12
Bolts/nut		Tightening torque		3 Nm
Bracket to body			Used in step	11
M8		Tightening torque		21 Nm
Exhaust system to body			Used in step	13
M8	Replace nuts.	Tightening torque		19 Nm
Exhaust bracket on body			Used in step	13
Hexagon screw M8x30		Tightening torque		19 Nm

V-clip to catalytic converterUsed in step [13](#)

V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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Diesel particulate sensor to exhaust systemUsed in step [13](#)

Sensor		Tightening torque	50 Nm
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Nitrogen oxide sensor downstream of SCR catalytic converterUsed in step [13](#)

Sensor		Tightening torque	50 Nm
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Cross-member/torsion strut to axle support and mountingUsed in step [14](#)

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

Front connection carrier to bodyUsed in step [15](#)

M10x18		Tightening torque	56 Nm
--------	--	-------------------	-------

Rear connection carrier to bodyUsed in step [15](#)

M8x18		Tightening torque	28 Nm
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Underbody protection to bodyUsed in step [16](#)

Screw		Tightening torque	3 Nm
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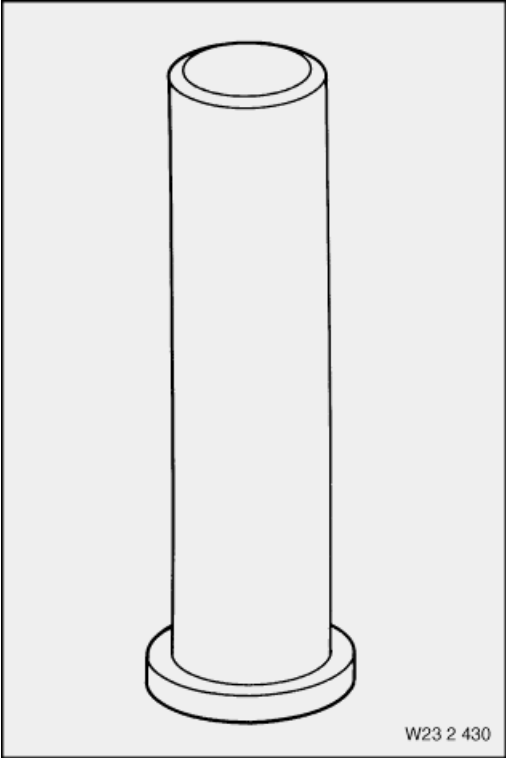
Overview of Special Tools**0 495 554 (33 5 070) Extension****Common**Used in step [7](#) [8](#) [10](#)

Usage	Pull-out extension for 33 5 040, 33 5 050, 33 5 060.
Included in the tool or work	
Storage location	A18
Replaced by	
In connection with	
SI-Number	01 21 06 (300)

Consisting of

Pos	BMW Order number	Replaced by	Designation	In Connection with
1	0 495 592 (33 5 071)		Extension (Extension (1 item)) discontinued, can only be ordered using complete tool	

0 491 591 (23 2 430) Mandrel



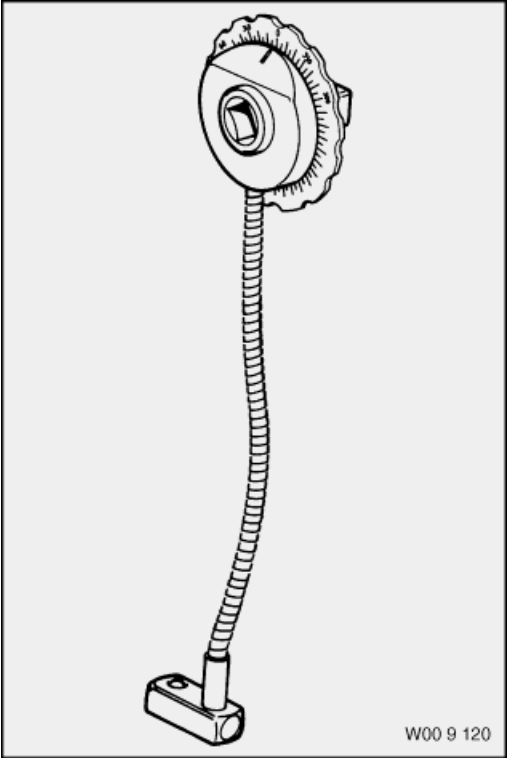
Common

Used in step 9

Usage	(drift) For fitting the radial sealing ring in the drive shaft in the front section of transmission housing (S5D 200G) and in the output flange (A5S 300J)
Included in the tool or work	
Storage location	B17
Replaced by	
In connection with	
SI-Number	01 02 91 (330)

0 490 504 (00 9 120) Torque angle measuring dial

Used in step 10



Common	
Usage	For torsion angle adjustment of cylinder head bolts (all engines) And reinforcement plate front axle support E46
Included in the tool or work	
Storage location	A4
Replaced by	
In connection with	
SI-Number	

26 12 011 Replacing grooved ball bearing in propeller shaft centre bearing



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

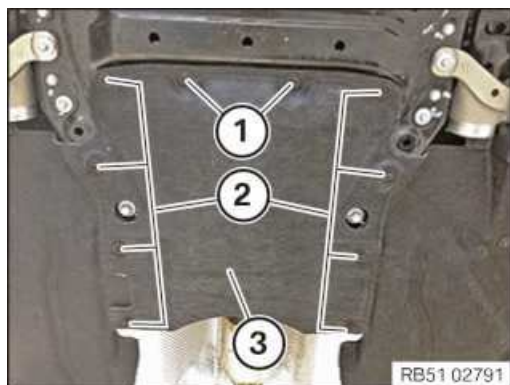
Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.

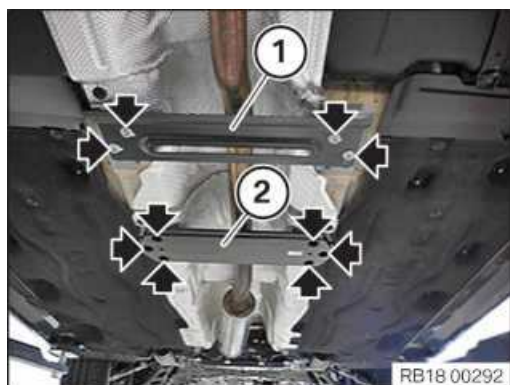
PRELIMINARY WORK

1 – If installed: Removing rear underbody protection



- Loosen screws (1) and (2).
- Remove underbody protection (3).

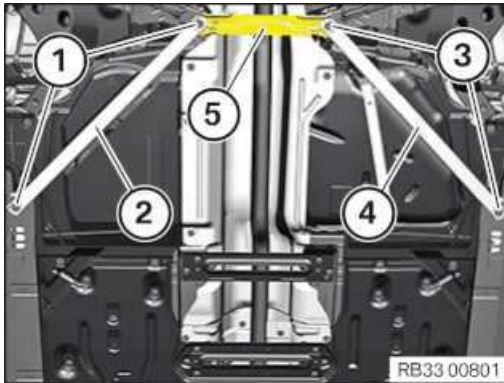
2 – Removing the connecting support from the tunnel in front and back



- Unscrew the bolts (arrows) from the connecting support (1).
- Feed out and remove the crossbeam (1).
- Unscrew the bolts (arrows) from the connecting support (2).
- Feed out and remove the crossbeam (2).

3 – Remove the cross strut with the torsion strut

Driving without a torsion strut is not permitted.



- Loosen screws (1).
- Thread out torsion strut (2) at left and remove.
- Loosen screws (3).
- Thread out torsion strut (4) at right and remove.
- Feed out and remove the cross-member (5).

4 – Remove exhaust system



WARNING

Hot surfaces.

Risk of burning!

- Perform all work only on components that have cooled down.

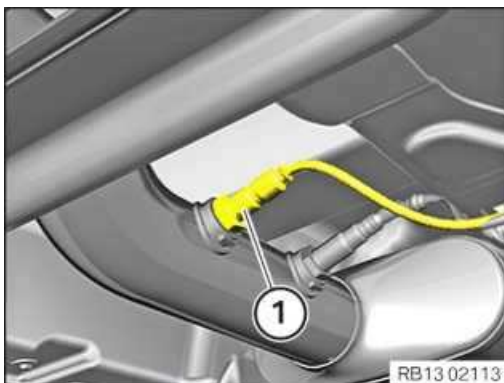


CAUTION

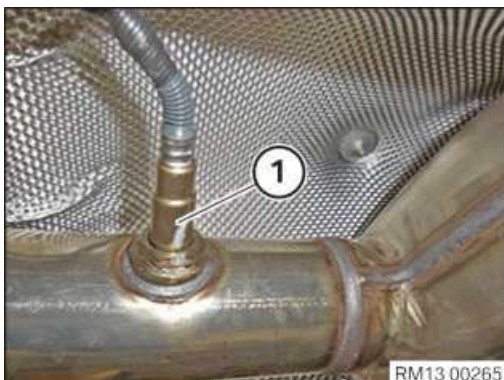
Heavy component.

Heavy components can lead to injury or damage.

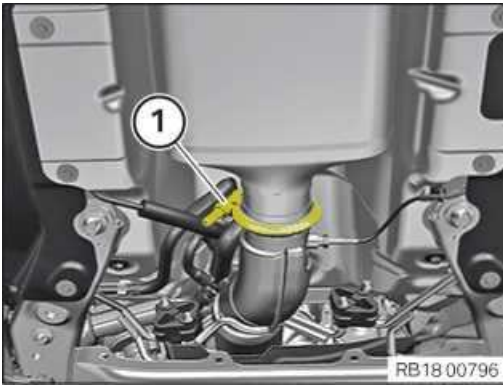
- Remove and install heavy components with the aid of another person/other persons.



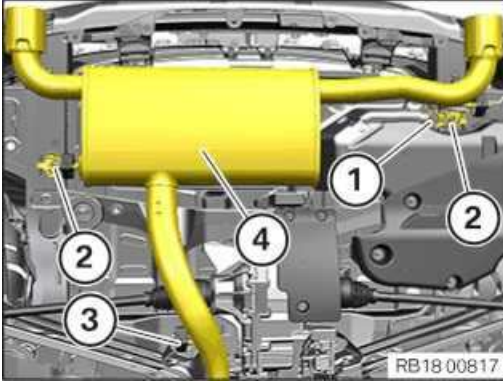
- Release the nitrogen oxide sensor (1) downstream of the SCR catalytic converter, guide it out and set it aside.



- Release the diesel particulate sensor (1), guide it out and set it aside.

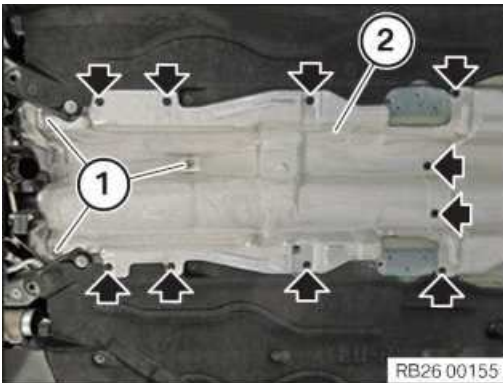


- Loosen V-band clamp (1).



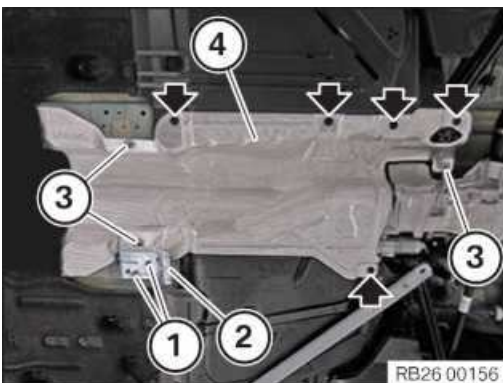
- Loosen screw (1).
- Loosen nuts (2).
- Release the rubber mount (3) of the exhaust system (4).
- Lower and guide out the exhaust system (4) with assistance of a second person and remove it.

5 – Remove front heat shield



- Remove screws (arrows).
- Loosen nuts (1).
- Guide the heat shield (2) out and remove it.

6 – Remove heat shield at rear.



- Loosen screws (1).
- Guide out and remove holder (2).
- Remove screws (arrows).
- Loosen nuts (3).
- Guide the heat shield (4) out and remove it.

7 – Remove propeller shaft



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to propeller shaft during removal.

Non-observance of the removal guidelines for the propeller shaft on the rear axle differential may cause severe damage.

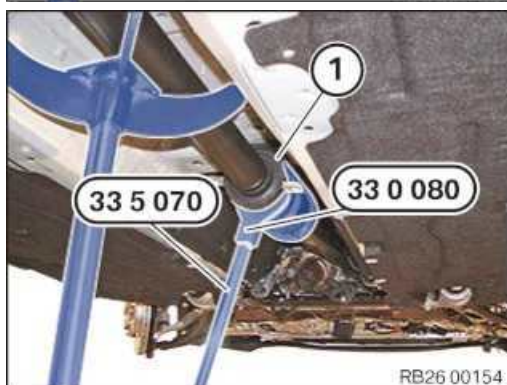
- Do not disassemble the three-hole flange, flexible disc and propeller shaft. The three-hole flange to the rear axle differential is balanced with the flexible disc and propeller shaft.
- Loosen the recessed nut against the direction of travel in clockwise direction. The propeller shaft must be loosened on the recessed nut only and exclusively in the direction of rotation otherwise the anti-twist lock of the bi-hexagonal flange nut is damaged.
- In the event of a damaged anti-twist lock on the bi-hexagonal flange nut: Replace the rear axle differential.



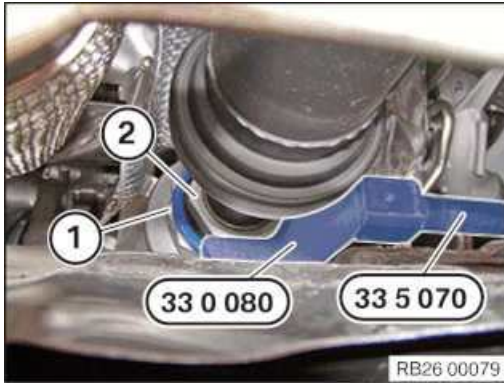
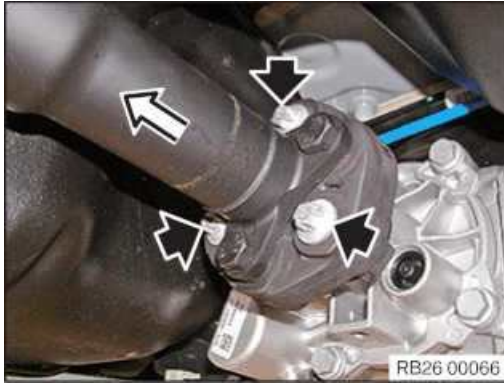
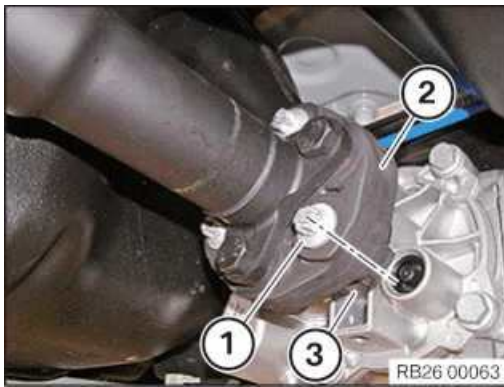
- Install the special tool between the front and rear propeller shaft.
- Make sure that the arrows on the special tool point forward in the direction of travel.



- Always support the propeller shaft (1) with a conventional jack.



- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.



TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Mark the installation position of the screw connection (1), the flexible disc (2) and the three-hole flange (3) on the same level.
- Loosen the screw connection (1).
- Loosen screws (1).
- Remove screws (arrows).
- Guide the propeller shaft out in the direction of the arrow and set it aside.



RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

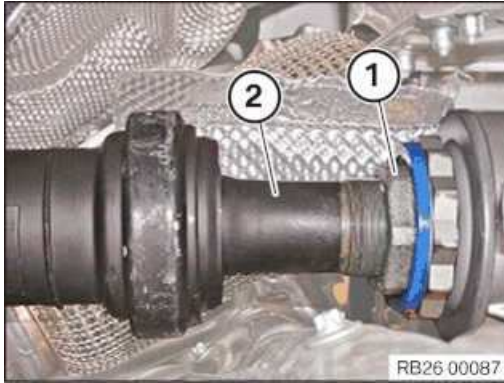
- Do not use the double hexagon head flange nut as counter support.
- Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .

The recessed nut (2) on the transfer box must **not** be used to detach the propeller shaft.

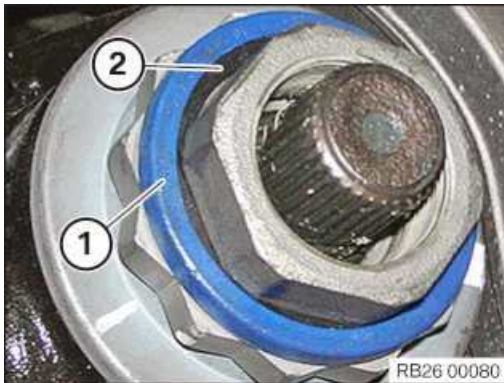
The double hexagon flange nut (1) must **not** be used for counter support.



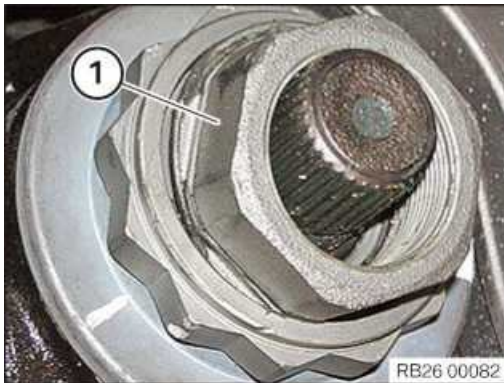
- Release the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.



- Thread the propeller shaft (2) out of the recessed nut (1) and remove.



- Thread the retaining clip (1) and the seal (2) out and remove.



- Thread out and remove the recessed nut (1).

8 – Removing the propeller shaft centre bearing



CAUTION

Component with heavy weight.

Danger of injury!

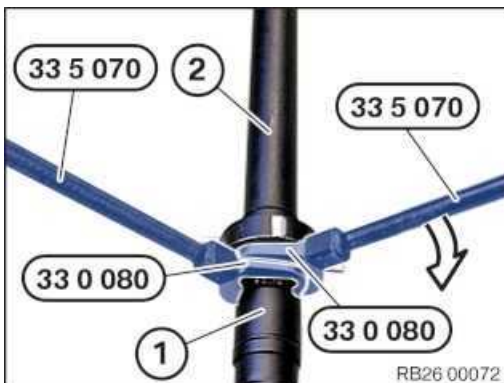
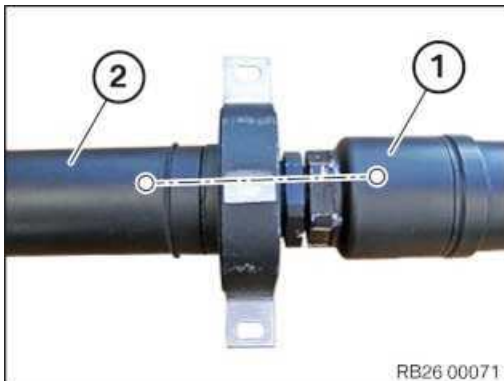
- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



TECHNICAL INFORMATION

The rear part of the propeller shaft must not hang freely, otherwise the gaiter of the propeller shaft centre bearing will be damaged.

It is mandatory to support the propeller shaft with a lever around the centre mount to protect joints.

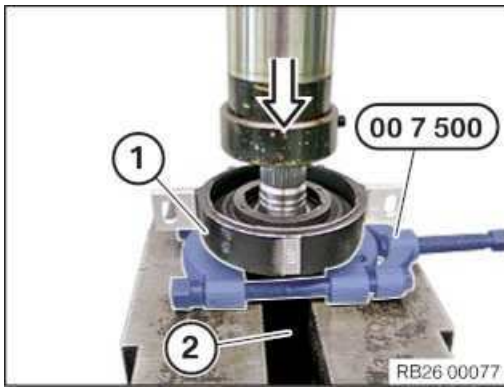


TECHNICAL INFORMATION

The propeller shaft is balanced.

The front and rear propeller shaft must be re-assembled in the same installation position.

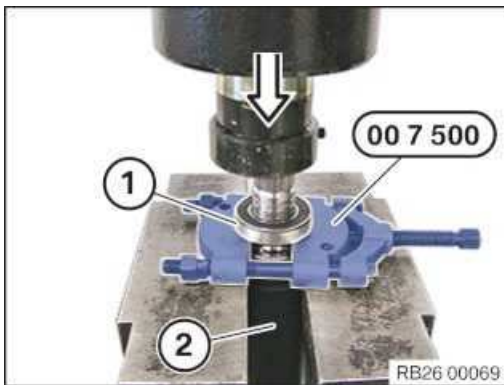
- Mark the alignment of the front propeller shaft (1) and the rear propeller shaft (2) in one plane.
- Hold the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and .
- Release the nut of the propeller shaft (2) with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.
- Pull the front propeller shaft and the rear propeller shaft apart in the direction of arrow.
- Remove the sealing ring (1), the circlip (2) and flange nut (3).



- Install the special tool between the centre mount (1) and the propeller shaft (2).
- Press the centre mount (1) of the propeller shaft (2) shut with the hydraulic press.

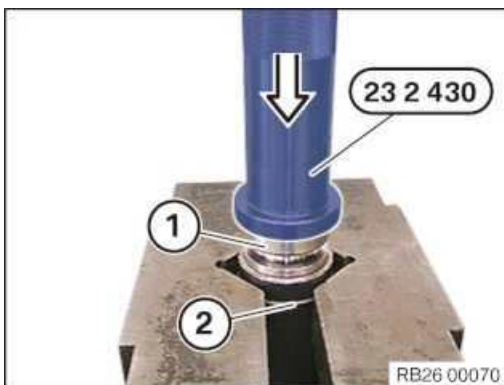
MAIN WORK

9 – Removing the grooved ball bearing in the propeller shaft centre bearing



- Install the special tool between the grooved ball bearing (1) and the propeller shaft (2).
- Use the hydraulic press to push off the grooved ball bearing (1) from the propeller shaft (2).

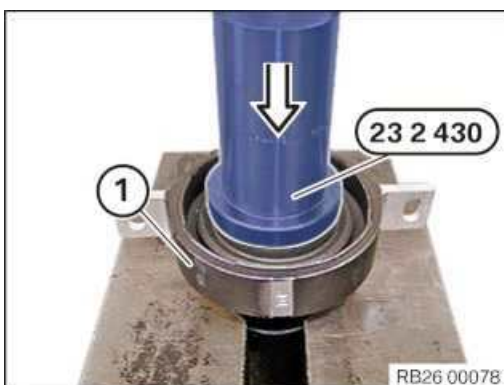
10 – Installing the grooved ball bearing in the propeller shaft centre bearing



- Press new grooved ball bearing (1) with the special tool **0 491 591 (23 2 430)** onto the propeller shaft (2).

POSTPROCESSES

11 – Install propeller shaft centre bearing



- Renew the centre mount (1).
- Parts:** Centre mount
- Slide the centre mount (1) onto the grooved ball bearing and press with the special tool **0 491 591 (23 2 430)** in the direction of arrow.



- Renew the flange nut (3), locking ring (2) and the sealing ring (1).

Parts: Flange nut, circlip and sealing ring

- Install the flange nut (3), locking ring (2) and the sealing ring (1).



- Screw the front and rear propeller shaft together in the direction of arrow and tighten it.

12 – Install propeller shaft.



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.



RISK OF DAMAGE

Damage to the propeller shaft during installation.

Non-observance of the installation guidelines for the propeller shaft on the rear axle differential may cause severe damage.

- Always renew the recessed nut on the rear axle differential. Screw locking must be available.
- Strictly observe a minimum hardening time of two hours after having screwed in the recessed nut. The hardening time may be longer at lower temperatures.

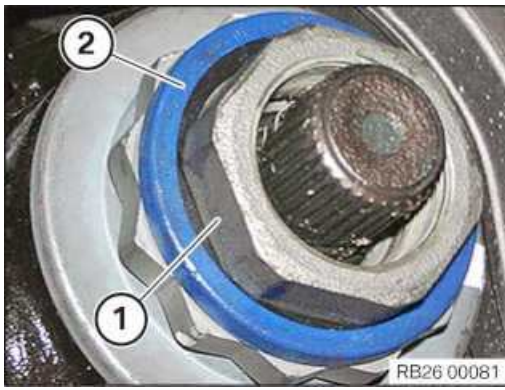


RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.



- Renew recessed nut (1).

Parts: Insert nut

- Renew the retaining clip (2) and the seal.

Parts: Retaining clip, seal

- Insert the seal with the recessed nut (1) and install.
- Insert the retaining clip (2) and install.
- Make sure that recessed nut (1) is screwed in within 5 min.
- Make sure that the hardening time of **minimum** 2 h for the recessed nut is observed.

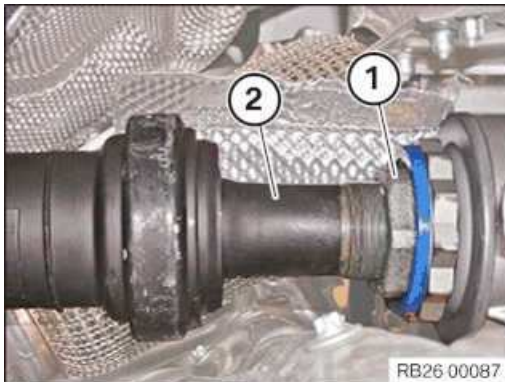
The hardening time must be extended at lower temperatures.



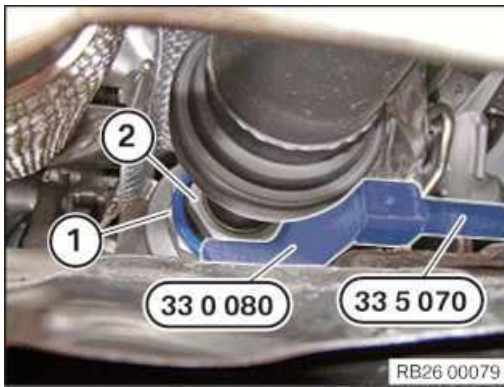
- Insert the propeller shaft (1) and install.
- Always support the propeller shaft (1) with a conventional jack.



- Hand-tighten the bolts (1).



- Push the propeller shaft (2) against the recessed nut (1) up to the limit position.
- Screw the propeller shaft (2) at least 2 thread starts onto the recessed nut (1) by hand.



RISK OF DAMAGE

Damage to the transfer box.

Non-observance of the removal and installation guidelines may cause severe damage to the transfer box.

- Do not use the double hexagon head flange nut as counter support.

- Protect the recessed nut (2) on the transfer box from twisting with the special tools **0 495 554 (33 5 070)** and .

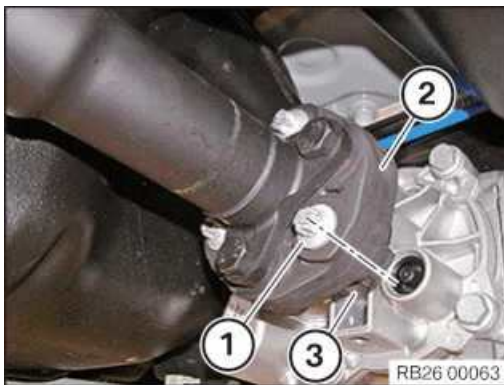
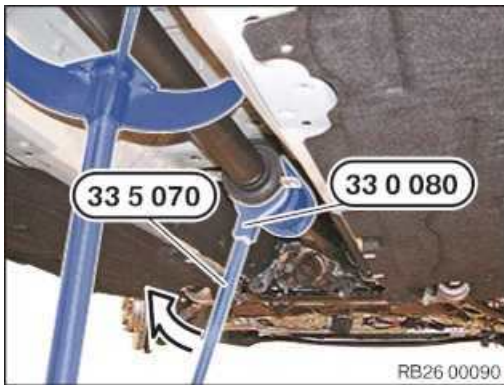
The recessed nut (2) on the transfer box must **not** be used to tighten the propeller shaft.

The double hexagon flange nut (1) must **not** be used for counter support.

- Tighten the front propeller shaft with the special tools **0 495 554 (33 5 070)** and in the direction of the arrow.

Propeller shaft to transfer box

		Tightening torque	80 Nm
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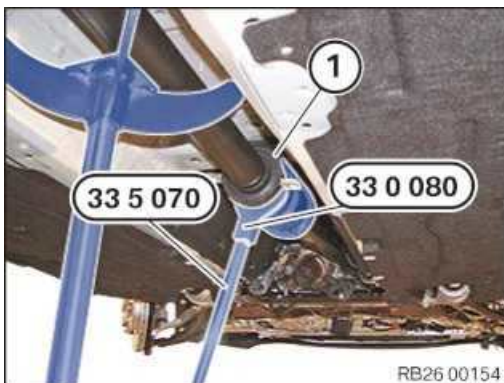
TECHNICAL INFORMATION

Compliance with the following instructions is required to avoid a humming noise from the propeller shaft after refitting the propeller shaft.

- Assemble the screw connection (1) of the flexible disc (2) and the three-hole flange (3) according to the mark.
- Renew screws (1).

Parts: Bolts

- Hand-tighten the bolts (1).
- Protect the propeller shaft (1) with the special tools **0 495 554 (33 5 070)** and from twisting.





- Tighten the bolts with the special tools **0 490 504 (00 9 120)** and .

Flexible disc to rear axle final drive

M12x1.5	Renew screws.	Tightening torque	55 Nm
			90 °



- Tighten the screws (1).

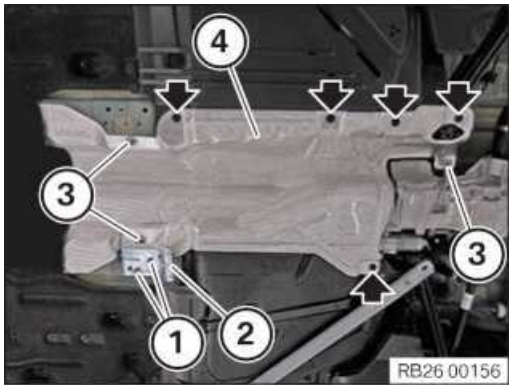
Centre mount to body

M8		Tightening torque	19 Nm
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- Guide the special tool out between the front and rear propeller shaft and remove.

13 – Installing the rear heat shield



- Insert and install the heat shield (4).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (3).

Heat shield to body

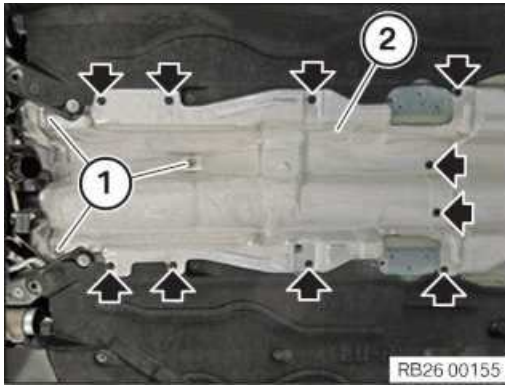
Bolts/nut		Tightening torque	3 Nm
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- Insert and install the holder (2).
- Tighten the screws (1).

Bracket to body

M8		Tightening torque	21 Nm
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14 – Install the front heat shield



- Insert and install the heat shield (2).
- Tighten screws (arrows).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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- Tighten nuts (1).

Heat shield to body

Bolts/nut		Tightening torque	3 Nm
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15 – Install exhaust system



CAUTION

Component with heavy weight.

Danger of injury!

- Note component's centre of gravity.
- Support component using a jack.
- Secure component against falling off the jack.

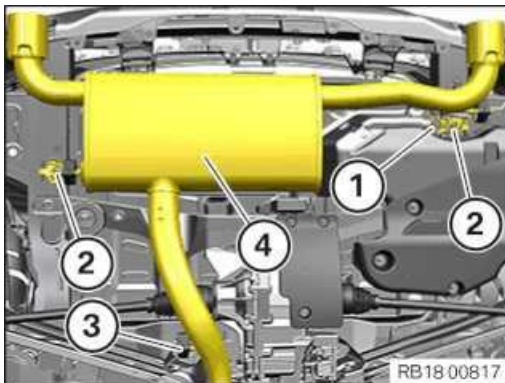


CAUTION

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.



- Feed in and install the exhaust system (4) with a second person.
- Renew nuts (2).

Parts: Nuts

- Tighten nuts (2).

Exhaust system to body

M8	Replace nuts.	Tightening torque	19 Nm
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- Tighten down screw (1).

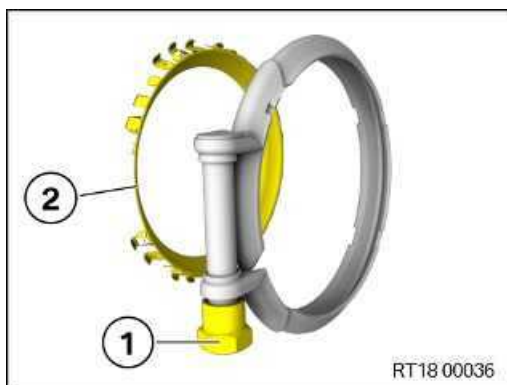
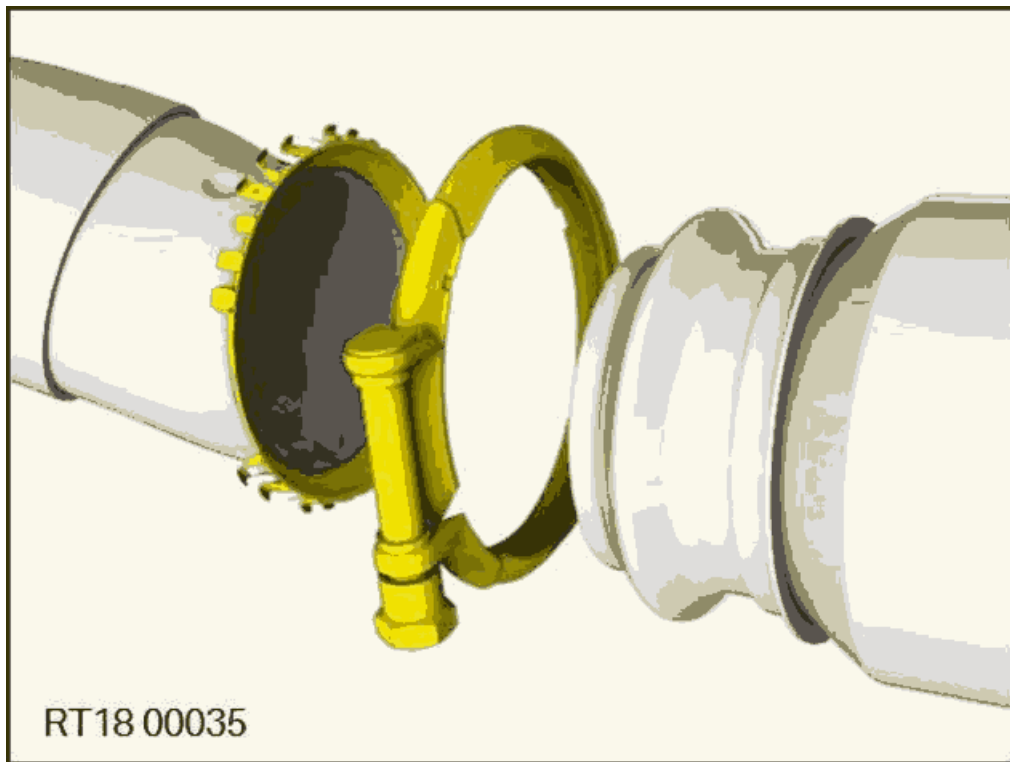
Exhaust bracket on body

Hexagon screw M8x30		Tightening torque	19 Nm
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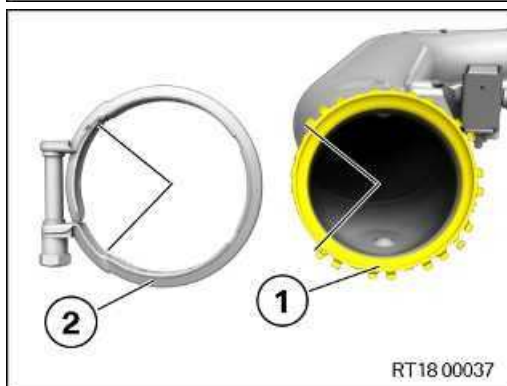
- Check the rubber mount (3) for damage and renew as needed.
- Mount rubber mount (3) on the exhaust system (4).

► **Install the V-clip**

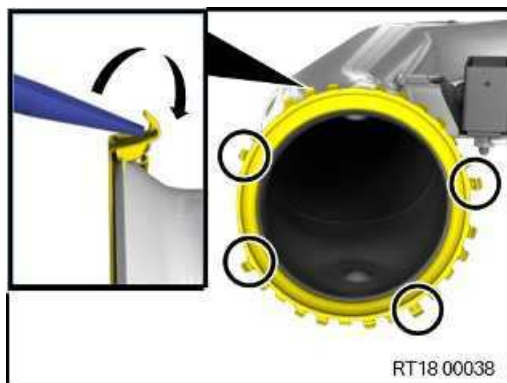
V-band clamp



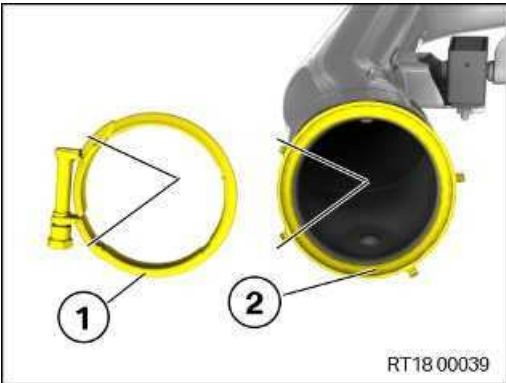
- Unscrew the nut (1) and remove the sealing ring (2).



- Renew the V-clip (2).
- Parts:** V-band clamp
- Mount the sealing ring (1) on the exhaust system.
- Ensure that the sealing ring (1) for the V-clip (2) is positioned correctly.



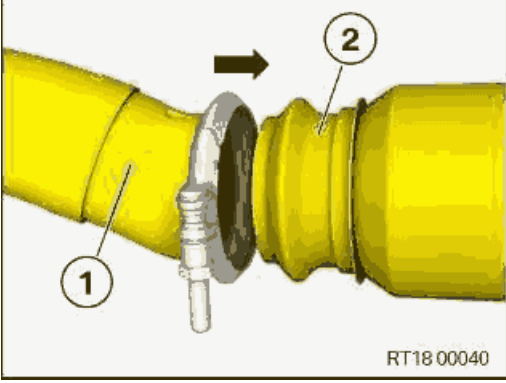
- Bend all sheet metal tabs over with a suitable tool, except those in the marked areas.



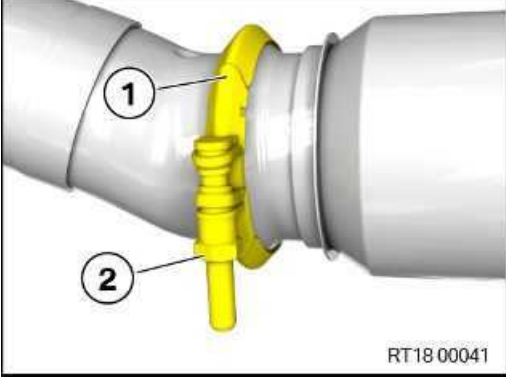
- Mount the V-clip (1) on the sealing ring (2).
- Make sure that the V-clip (1) is positioned correctly on the sealing ring (2).



- Make sure that the V-clip rests against the sheet metal tabs after mounting (marks).



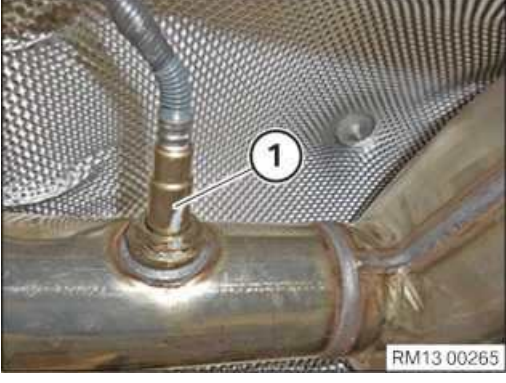
- Connect the exhaust system (1) with the catalytic converter (2) and position correctly.



- Make sure that V-clip (1) is fitted correctly.
- Tighten down screw (2).

V-clip to catalytic converter

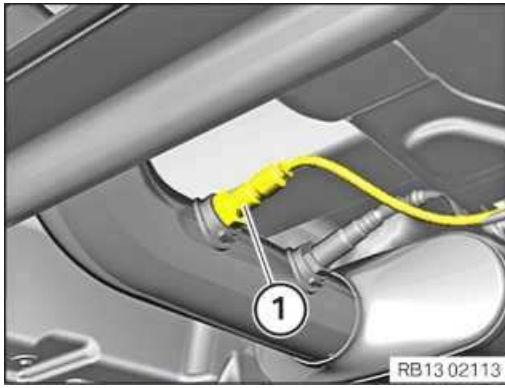
V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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- Feed in, install and tighten diesel particulate sensor (1).

Diesel particulate sensor to exhaust system

Sensor		Tightening torque	50 Nm
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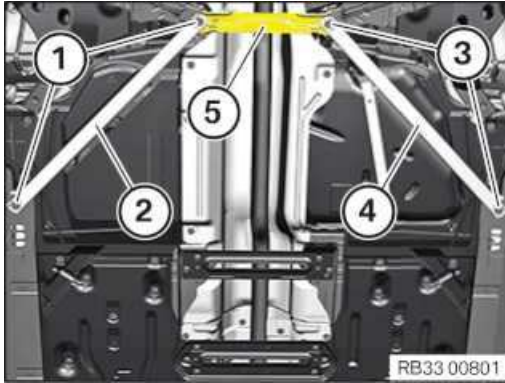


- Feed in, install and tighten nitrogen oxide sensor (1).

Nitrogen oxide sensor downstream of SCR catalytic converter

Sensor		Tightening torque	50 Nm
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16 – Install the cross-member with torsion struts



- Insert and install the cross-member (5).
- Thread in torsion strut (4) at right and install.
- Renew screws (3).

Parts: Bolts

- Tighten down screws (3).

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

- Guide in and install the left torsion strut (2).
- Renew screws (1).

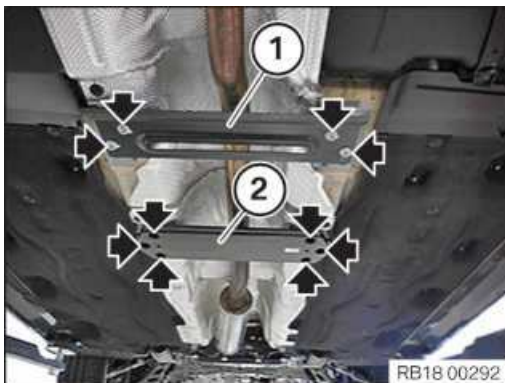
Parts: Bolts

- Tighten the screws (1).

Cross-member/torsion strut to axle support and mounting

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

17 – Install the connecting support on the tunnel in front and back



- Insert and install connecting supports (2).
- Tighten the screws (arrows) from the connecting support (2).

Front connection carrier to body

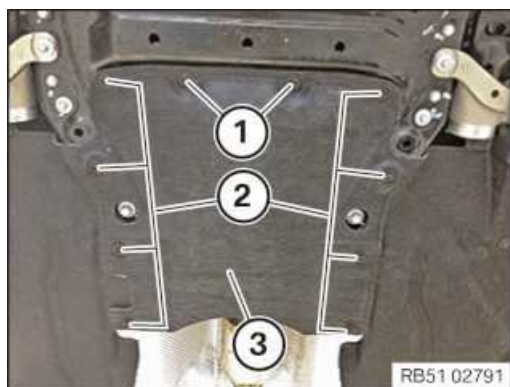
M10x18		Tightening torque	56 Nm
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- Insert and install connecting supports (1).
- Tighten the screws (arrows) from the connecting support (1).

Rear connection carrier to body

M8x18		Tightening torque	28 Nm
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18 – If installed: Installing underbody protection at rear



- Install the underbody protection (3).
- Tighten down screws (1) and (2).

Underbody protection to body

Screw		Tightening torque	3 Nm
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Additional Information

Overview of Tightening Torques

Propeller shaft to transfer box

Used in step [12](#)

		Tightening torque	80 Nm
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Flexible disc to rear axle final drive

Used in step [12](#)

M12x1.5	Renew screws.	Tightening torque	55 Nm 90 °
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Centre mount to body

Used in step [12](#)

M8		Tightening torque	19 Nm
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Heat shield to body

Used in step [13](#) [14](#)

Bolts/nut		Tightening torque	3 Nm
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Bracket to body

Used in step [13](#)

M8		Tightening torque	21 Nm
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Exhaust system to body

Used in step [15](#)

M8	Replace nuts.	Tightening torque	19 Nm
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Exhaust bracket on body

Used in step [15](#)

Hexagon screw M8x30		Tightening torque	19 Nm
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V-clip to catalytic converter

Used in step [15](#)

V-band clamp	Renew V-band clamp.	Tightening torque	22 Nm
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Diesel particulate sensor to exhaust system

Used in step [15](#)

Sensor		Tightening torque	50 Nm
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Nitrogen oxide sensor downstream of SCR catalytic converter

Used in step [15](#)

Sensor		Tightening torque	50 Nm
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Cross-member/torsion strut to axle support and mounting

Used in step [16](#)

M12x48	Renew screws.	Jointing torque	100 Nm
		Angle of rotation	90 °

Front connection carrier to body

Used in step 17

M10x18		Tightening torque	56 Nm
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Rear connection carrier to body

Used in step 17

M8x18		Tightening torque	28 Nm
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Underbody protection to body

Used in step 18

Screw		Tightening torque	3 Nm
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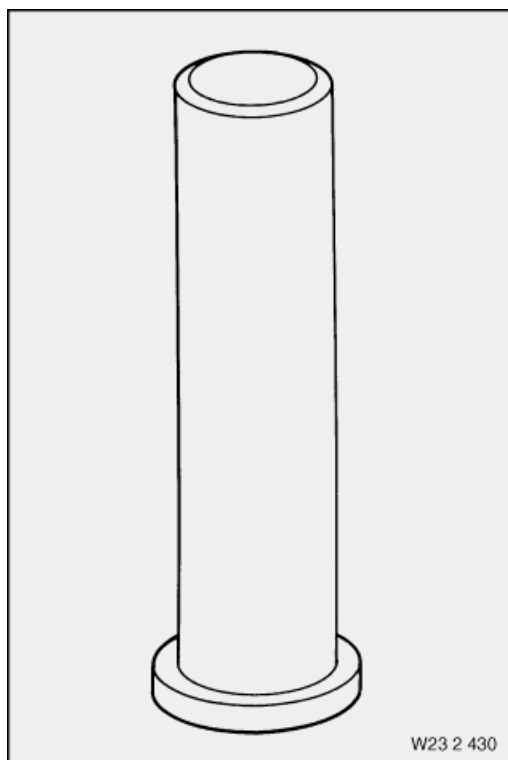
Overview of Special Tools**0 495 554 (33 5 070) Extension****Common**

Used in step 7 8 12

Usage	Pull-out extension for 33 5 040, 33 5 050, 33 5 060.
Included in the tool or work	
Storage location	A18
Replaced by	
In connection with	
SI-Number	01 21 06 (300)

Consisting of

Pos	BMW Order number	Replaced by	Designation	In Connection with
1	0 495 592 (33 5 071)		Extension (Extension (1 item)) discontinued, can only be ordered using complete tool	

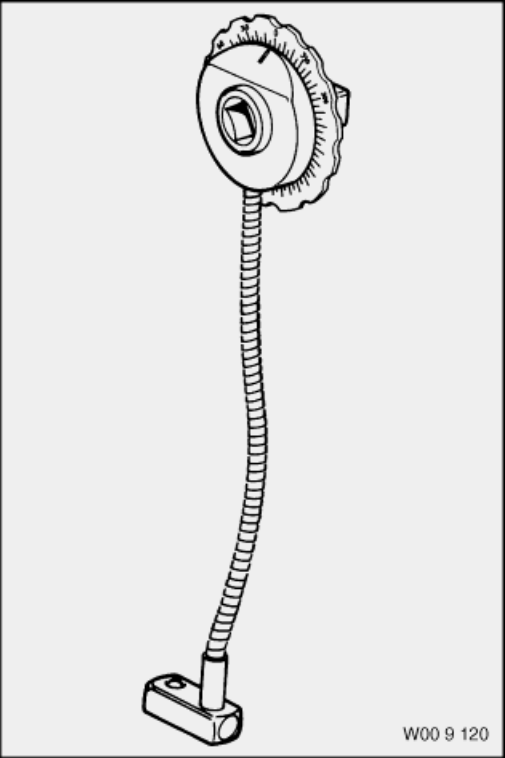
0 491 591 (23 2 430) Mandrel**Common**

Used in step 10 11

Usage	(drift) For fitting the radial sealing ring in the drive shaft in the front section of transmission housing (S5D 200G) and in the output flange (A5S 300J)
Included in the tool or work	
Storage location	B17
Replaced by	
In connection with	
SI-Number	01 02 91 (330)

0 490 504 (00 9 120) Torque angle measuring dial

Used in step 12



Common	
Usage	For torsion angle adjustment of cylinder head bolts (all engines) And reinforcement plate front axle support E46
Included in the tool or work	
Storage location	A4
Replaced by	
In connection with	
SI-Number	