

**WARNUNG**

Gefahr des Verlusts der Text-Bild-Zuordnung beim Ausdruck.

- **Aus technischen Gründen kann derzeit nicht ausgeschlossen werden, dass trotz einwandfreier Darstellung auf dem Bildschirm beim Ausdruck der Zusammenhang von Text und zugehörigem Bild verloren geht.**
- **Wird der Fehler nicht bemerkt, besteht die Gefahr, daß Arbeiten nicht korrekt durchgeführt werden und es dadurch zu Personen- und Sachschäden kommt.**

→ Vergleichen Sie deshalb nach dem Druckvorgang unbedingt die Ausdrücke mit der Bildschirmdarstellung. Korrigieren Sie die Ausdrücke im Fehlerfall so, daß der Inhalt der Bildschirmdarstellung zutreffend wiedergegeben wird.

**WARNING**

Danger of losing text-figure correspondence when printing out.

- **For technical reasons, it can currently not be ruled out that the correspondence between text and associated figure can be lost when it is printed out, even though the display on the screen is correct.**
- **If the fault is not noticed, there is the danger that work will not be performed correctly which can cause injury and damage.**

→ Therefore, always compare printouts with the screen display after printing them out. Correct the printouts if they are faulty so that the content of the screen display matches that on the printouts.

**AVERTISSEMENT**

Risque de perte de la correspondance texte-illustration lors de l'impression papier.

- **Pour des raisons techniques, il ne peut pas être exclu à l'heure actuelle que, même en cas d'affichage correct à l'écran, la correspondance entre le texte et l'illustration puisse être erronée sur l'impression papier.**
- **Si l'erreur passe inaperçue, on court le risque d'exécuter certaines opérations de manière incorrecte pouvant conduire à des dommages corporels et matériels.**

→ Comparez impérativement pour cette raison les impressions papier avec l'affichage à l'écran. Corrigez-les en cas d'erreur de manière à reproduire correctement l'affichage à l'écran.

**ATTENZIONE**

Pericolo di perdita dell'abbinamento testo-immagine nella stampa.

- **Per motivi tecnici non è escluso che, nonostante la rappresentazione sullo schermo risulti perfetta, durante la stampa venga persa la corrispondenza fra testo e relativa immagine.**
- **Se tale difetto non viene rilevato vi è il pericolo che i lavori non siano eseguiti correttamente; ciò può avere come conseguenza lesioni e danneggiamenti.**

→ Per questo motivo, dopo la stampa è assolutamente necessario confrontare le stampe con la rappresentazione sullo schermo. In caso di errore si prega di correggere le stampe, così da garantire la riproduzione esatta della rappresentazione sullo schermo.

**ADVERTENCIA**

Al imprimir se corre el riesgo de perder la correcta asignación de las figuras al texto.

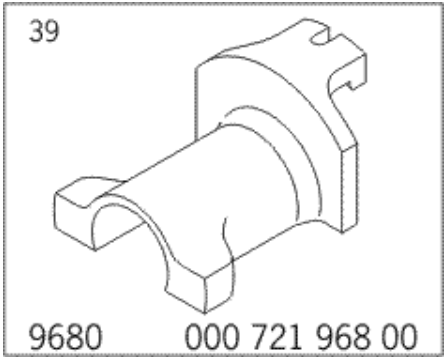
- Por motivos técnicos, por el momento no se puede descartar que, aun siendo correcta la imagen que aparezca en la pantalla, al imprimir se pierda la correlación entre el texto y la figura correspondiente.
- Si este error pasara desapercibido, existe el riesgo de que los trabajos no se ejecuten de forma correcta y, por tanto, se produzcan daños personales y materiales.

→ Por ello le rogamos que tras el proceso de impresión compare siempre las copias impresas con la imagen de la pantalla. En caso de error, corrija las copias impresas de forma que se correspondan con el contenido de la imagen de la pantalla.

39 35 19 Removing and installing rear cardan shaft - as of MY 2003

- [Removing rear cardan shaft](#)
- [Installing rear cardan shaft](#)

Tools

Designation	Type	Number	Explanation	
centring tool	commercially available tool	9680		

Removing rear cardan shaft

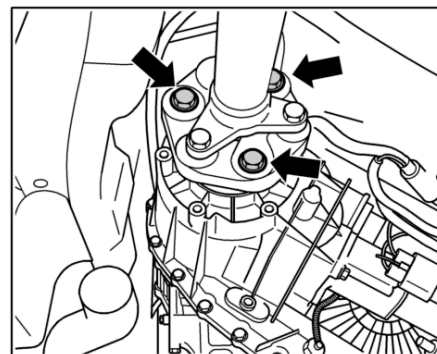
Removing rear cardan shaft



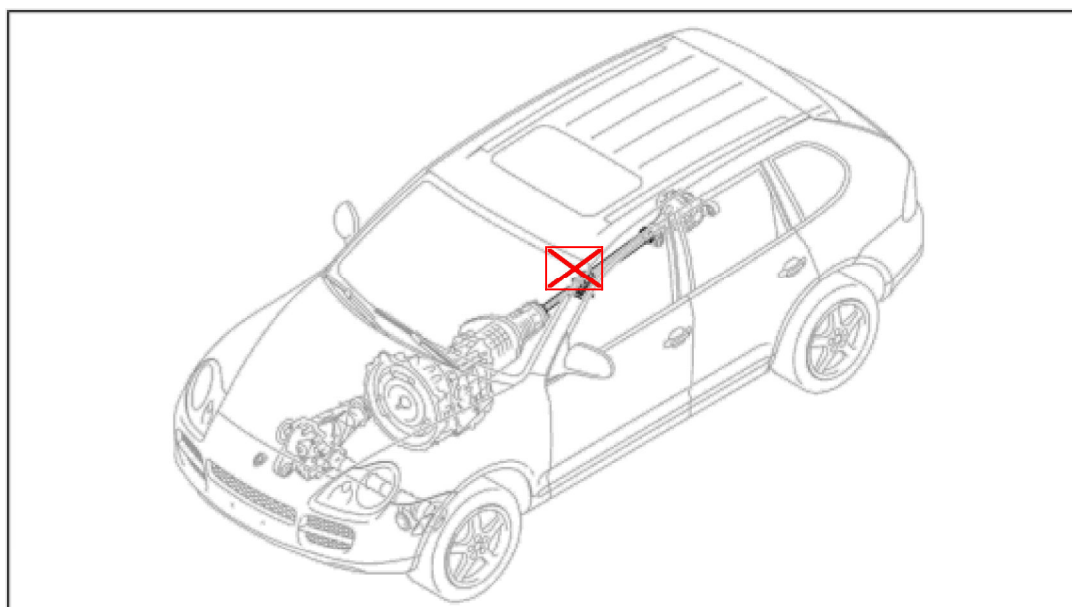
Note

- If the cardan shaft or transfer box has to be replaced, please ignore the next step.
- Marking the position of the cardan shaft with respect to the transfer box triangular flange serves only to prevent possible humming noises.
- To loosen the cardan shaft on the rear axle transmission, a second fitter should counter the fastening screws **-arrows-** at the triangular flange of the transfer box.

Installation Location:

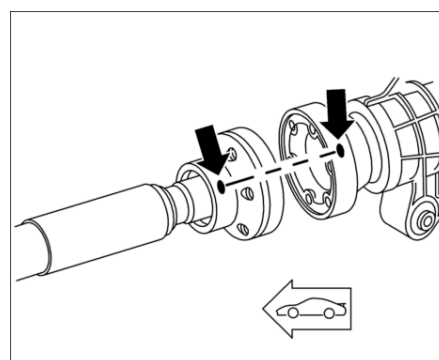


Rear cardan shaft to transfer box



Overview of cardan shaft

1. Move selector lever to position N.
2. The position of the cardan shaft **-arrows-** with respect to the rear axle transmission flange is marked with a white dot, match point, on both components.



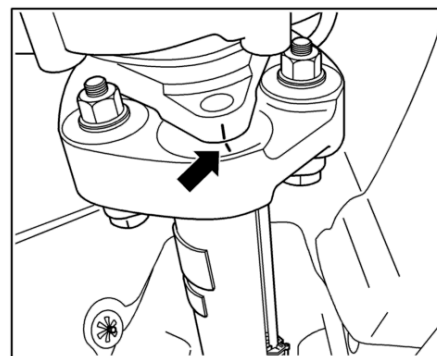
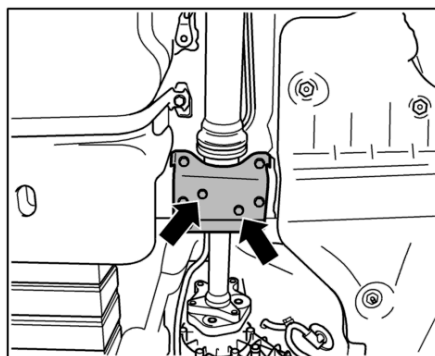
Match points for cardan shaft to final drive



Note

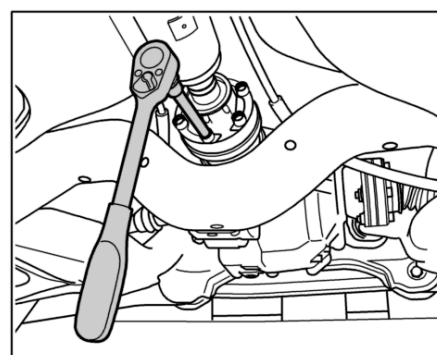
- The colour marking, match point, on the cardan shaft and on the rear final drive flange must be aligned. This will neutralise the residual imbalance of the components.

3. Mark the position of the cardan shaft **-arrow-** with respect to the transfer box flange with a coloured pen.



Cardan shaft support to centre bearing Mark for rear cardan shaft to transfer box

4. Loosen fastening screws **-arrow-** securing cardan shaft support to centre bearing.
5. Unscrew fastening screws on the cardan shaft at the rear axle transmission → [Cardan shaft to rear final drive](#) .



Cardan shaft to rear final drive

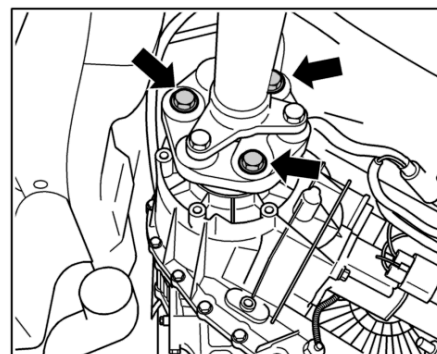


ATTENTION

Noises caused by damage in the drive line

- Faulty centre bearing; replace cardan shaft
- Do not loosen cardan shaft bolts using rubber/metal disc.

6. Unscrew fastening screws **-arrows-** on the cardan shaft at the transfer box. Counter with an open-ended wrench.



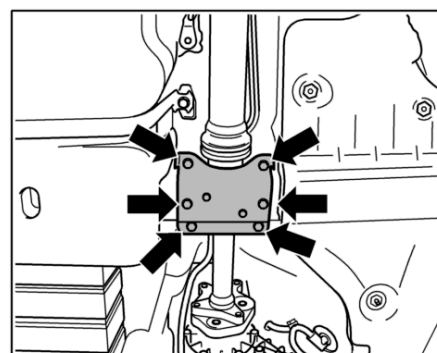
Cardan shaft to transfer box



ATTENTION

Cardan shaft can be damaged if not handled correctly

- Avoid repeated sagging or significant vertical traction.
- When one of the two flanges on the cardan shaft has been released, the centre bearing must be relaxed!
- Do not leave cardan shaft hanging. All three fastening points for transfer box, centre bearing and rear final drive must always be screwed in.
- The recommended procedures must be followed during installation, otherwise the position of the cardan shaft in its original place is no longer guaranteed. Possible result: premature failure of the centre bearing resulting in subsequent cardan shaft replacement.



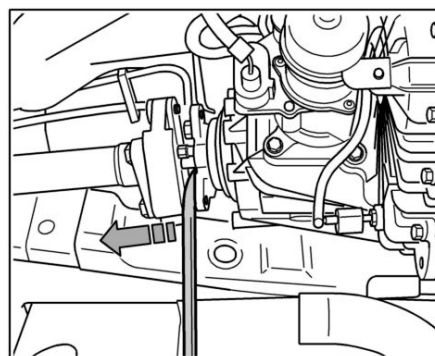
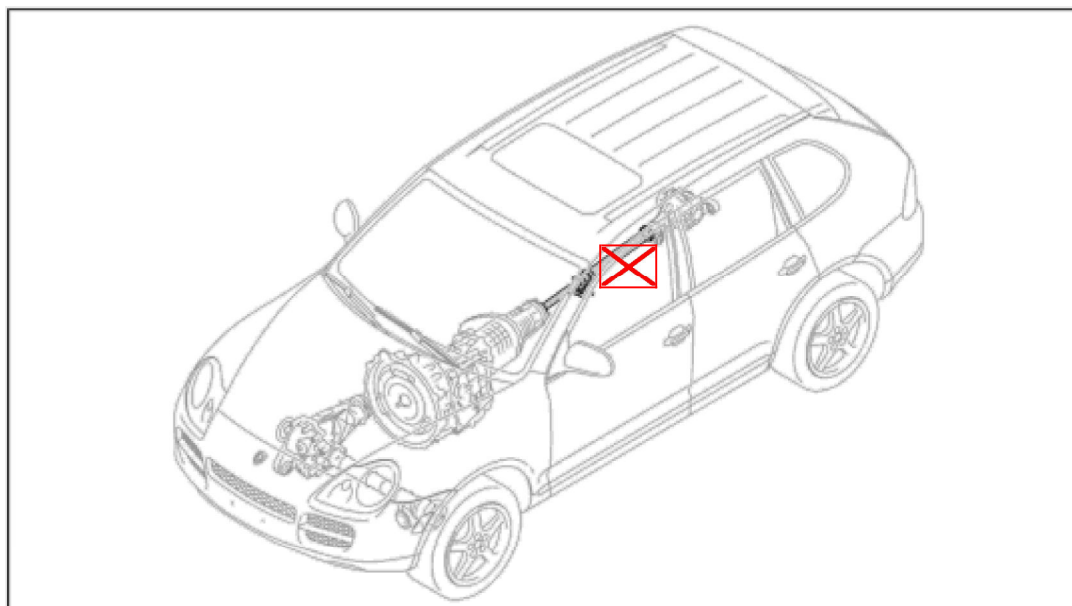
Cardan shaft centre bearing to body

7. Release cardan shaft centre bearing holder. To do this, unscrew six fastening screws **-arrows-** .
8. Carefully separate cardan shaft from transfer box → [Removing cardan shaft](#) and press backwards.

**Note**

- To prevent the cardan shaft from being damaged, a second mechanic is required to remove the equipment.

9. Remove the cardan shaft.

*Removing cardan shaft***Installing rear cardan shaft****Installing rear cardan shaft****Installation Location:***Overview of rear cardan shaft***ATTENTION****Cardan shaft can be damaged if not handled correctly**

- Avoid repeated sagging or significant vertical traction.
- When one of the two flanges on the cardan shaft has been released, the centre bearing must be relaxed!
- Do not leave cardan shaft hanging. All three fastening points for transfer box, centre bearing and rear final drive must always be screwed in.
- The recommended procedures must be followed during installation, otherwise the position of the cardan shaft in its original place is no longer guaranteed. Possible result: premature failure of the centre bearing resulting in subsequent cardan shaft replacement.

**ATTENTION****Leakage due to damage to centring sleeve**

- Ensure that no damage occurs during removal and installation.
- Centring sleeve should be greased slightly.
- Transfer box journal must be clean.

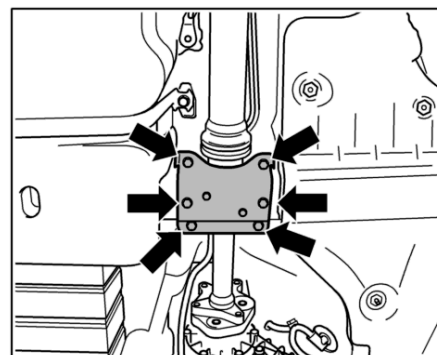
**Note**

- *There is no colour marking on the flange to the transfer box for installing new components, transfer box or cardan shaft. As a result, positioning is not an issue.*
- *If none of the components are replaced, the mark you apply is a precautionary measure in order to avoid humming noises from the drive line.*

**Note**

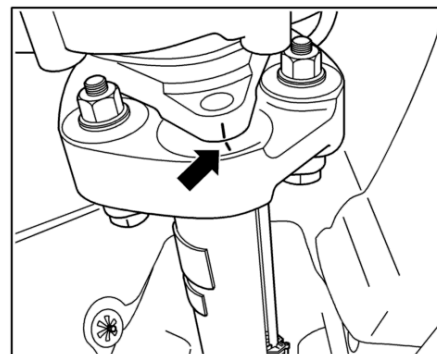
- *To prevent the cardan shaft from being damaged, a second mechanic is required to install the equipment.*

1. Install cardan shaft.
2. Pull cardan shaft joints apart so that they sit in the transmission flanges.
3. Screw in six screws **-arrow-** on the centre bearing holder but do not tighten.



Cardan shaft centre bearing to body

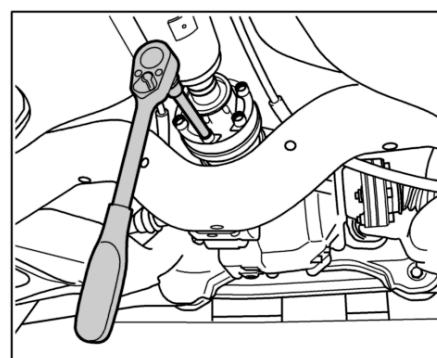
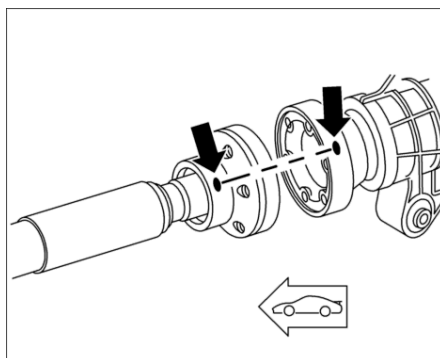
4. Position the cardan shaft at the colour markings **-arrow-** again.



Marking on transfer box flange/cardan shaft

**Note**

- The colour marking, match point **-arrow-**, on the cardan shaft and on the flange of the rear final drive must be aligned. This will neutralise the residual imbalance of the components.



Note

- To attach the cardan shaft to the rear axle transmission, a second fitter should counter the fastening screws on the triangular flange of the transfer box.

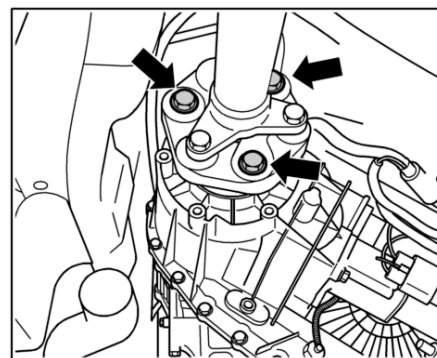
Match points for cardan shaft to final drive

Cardan shaft to rear final drive

- Screws which are tightened with a torque angle must be replaced with new ones.

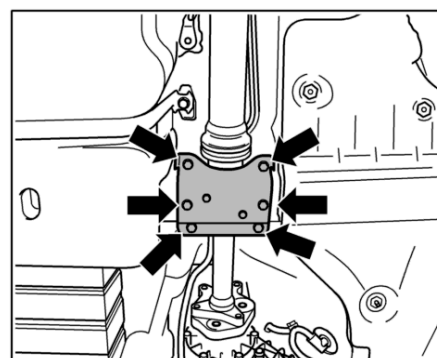
5. Screw in new screws for cardan shaft flange at the rear axle transmission. → **Initial tightening: 22 ftlb.**
→ **Final tightening: 90 °**

6. Tighten bolts connecting cardan shaft triangular flange to transfer box **-arrows-**. Counter with an open-ended wrench. → **Tightening torque: 56 ftlb.**



Cardan shaft to transfer box

7. Screw in fastening screws for securing cardan shaft centre bearing holder to body **-arrows-**. → **Tightening torque: 44 ftlb.**

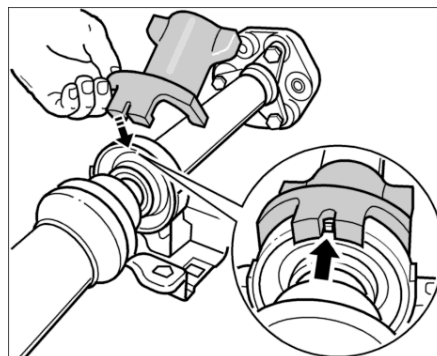


Cardan shaft centre bearing to body



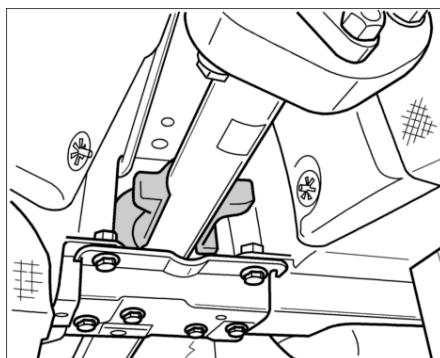
Note

- Centre bearing must be installed without tension.



- Fit special tool **centring tool 9680** → *Special tool in installation position in the specified sequence.*

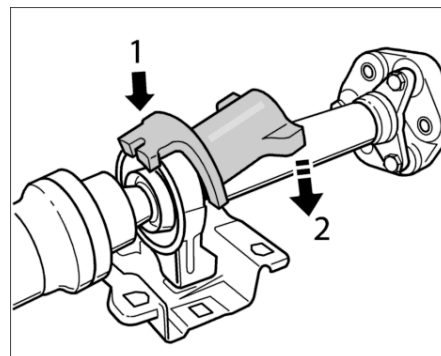
8. Mount special tool **centring tool 9680** *-arrow, inset-*.



Special tool in installation position

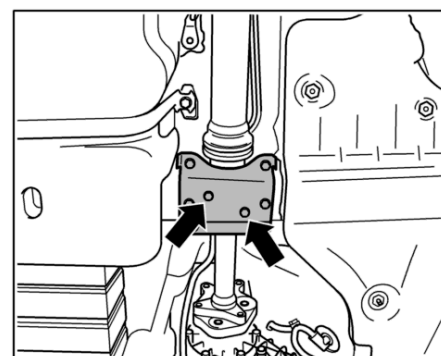
9. Press on special tool **centring tool 9680** in sequence according to numbering *-1, 2-*.

Mounting special tool 9680



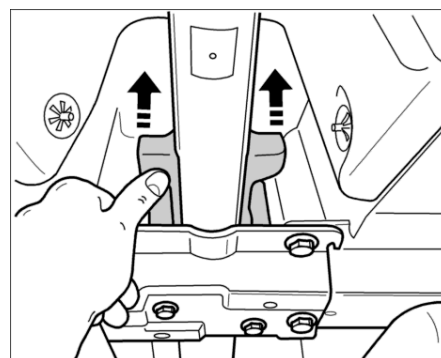
Pressing on special tool 9680

10. Tighten bolts *-arrow-* connecting holder to centre bearing. → **Tightening torque: 15 ftlb.**



Cardan shaft support to centre bearing

11. Remove special tool **centring tool 9680**. *-arrows-*



Removing special tool 9680

9PAAD1

as of MY 2003

Country C00, C02, C05, C07, C08, C09, C10, C11, C12, C13, C14, C15, C16, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C32, C33, C34, C35, C36, C37, C38, C39, C45, C46, C98, C99