

**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.

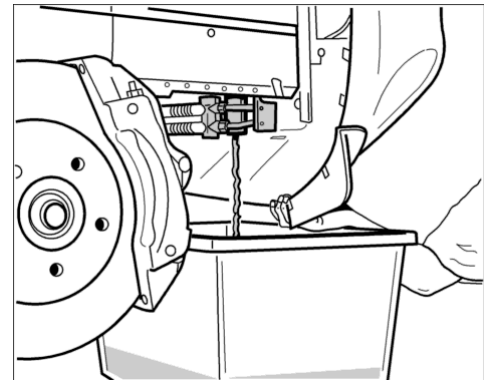
19 50 19 Removing and installing coolant pump - as of MY 2003

- [Preliminary work](#)
- [Information](#)
- [Removing coolant pump](#)
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- [Subsequent work](#)

Preliminary work

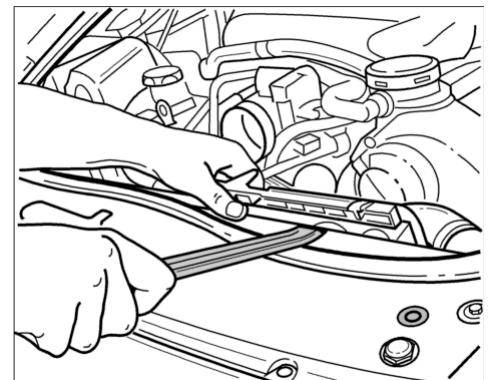
Preliminary work

1. Drain cooling system. → 193817 Draining and filling coolant (includes bleeding)



Draining cooling system

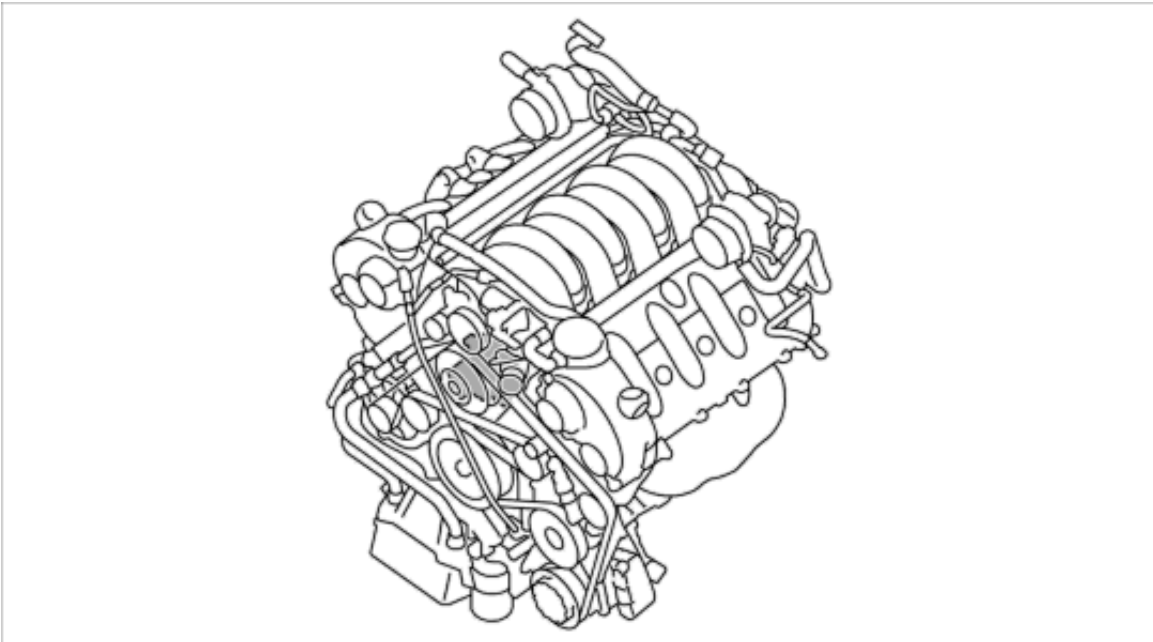
2. Remove the radiator frame. → 193817 Draining and filling coolant (includes bleeding)



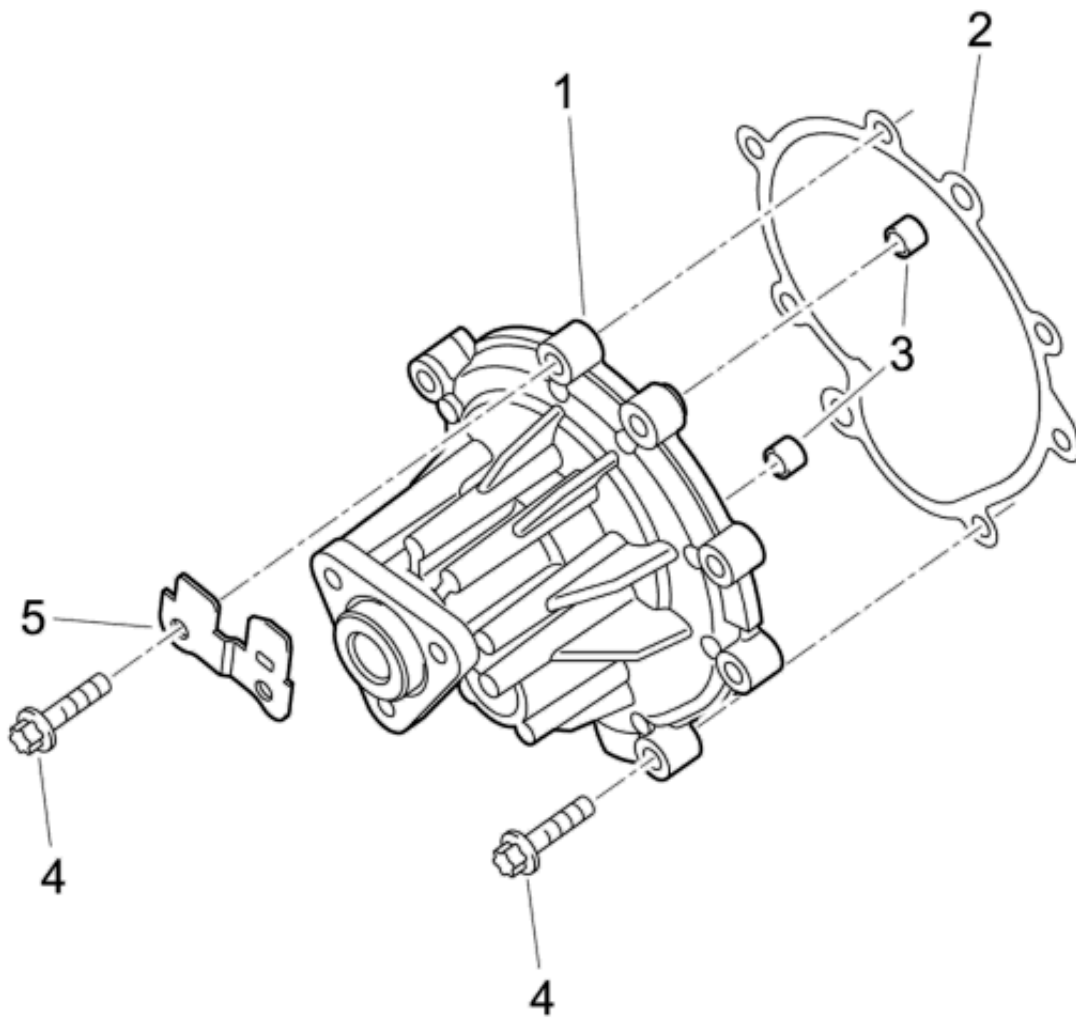
Radiator frame

Information

Component overview for coolant pump



Overview of coolant pump in engine

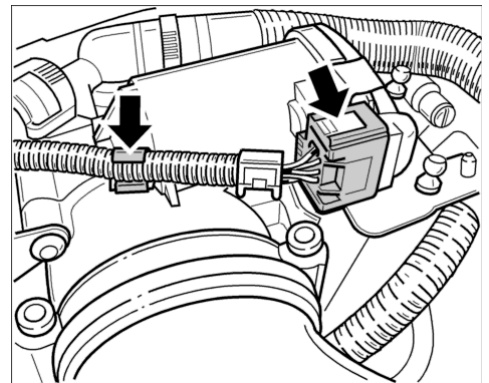


Component overview for coolant pump

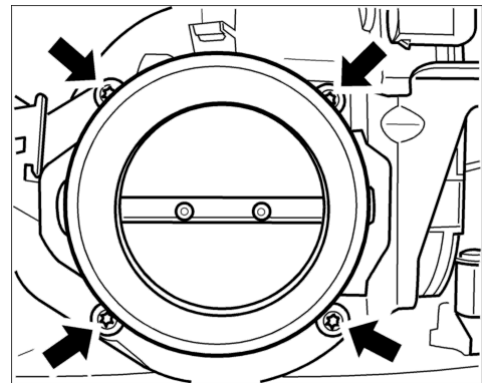
- 1 - Coolant pump
- 2 - Seal for coolant pump (replace seal)
- 3 - 2 dowel sleeves (do not remove)
- 4 - 8 M6x25 fastening screws (tightening torque 10 Nm (7.5 ftlb.))
- 5 - Support for cable duct (fit with the two upper fastening screws)

Removing coolant pump**Removing coolant pump**

1. Separate the electric connection from the throttle adjuster. To do this, press on the plug at the top and bottom and, at the same time, pull it off. Unclip the cable from the sheetmetal holder.

*Electric connection on throttle adjuster*

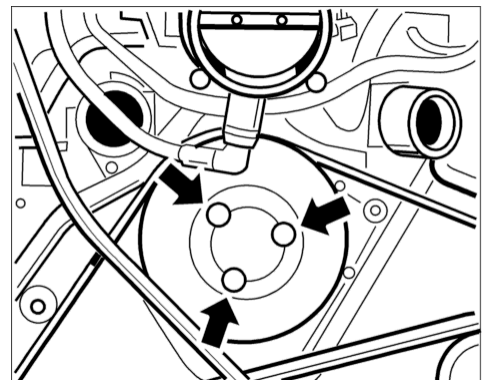
2. Remove the throttle adjuster.

*Fastening screws on throttle adjuster*

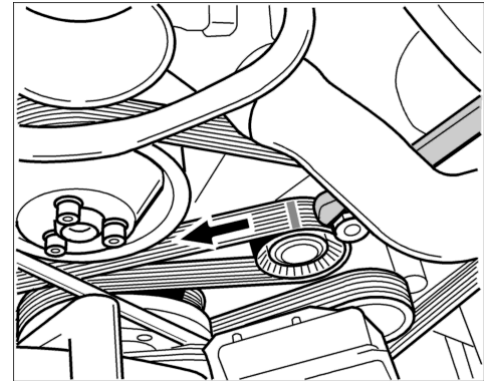
i **Note**

- To ease removal, spray the pulley from the rear side with an anti-corrosion agent.

3. Unscrew the three fastening screws on the coolant pump pulley. Wrench size is T 40.

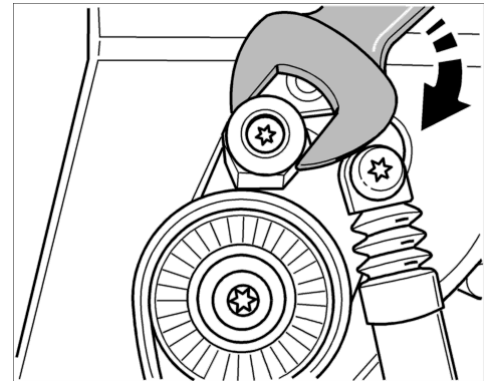
*Fastening screws for coolant pump pulley*

4. Remove the drive belt from the coolant pump pulley. Mark the direction of running of the drive belt with chalk.



Drive belt on coolant pump pulley

5. Use an open-ended wrench (a/f 30) to turn the belt tensioner clockwise and, at the same time, remove the drive belt from the tensioning roller. Relieve the belt tensioner carefully. Remove the drive belt from the coolant pump.

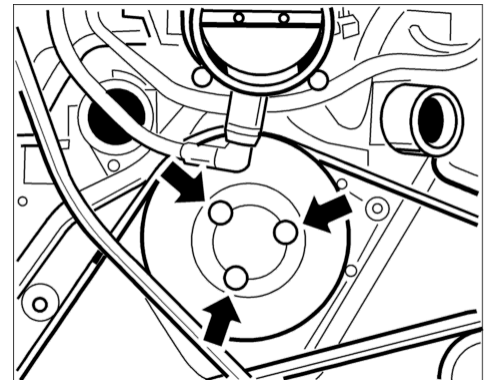


Belt tensioner

 **ATTENTION**

Risk of damaging pulley!

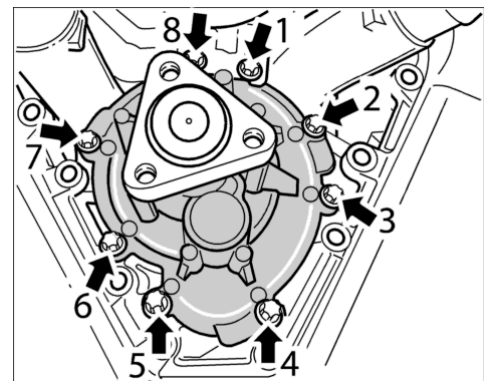
- The pulleys of the engine accessories are made of plastic. Do not use damaged pulleys.
- The pulley is sensitive to impacts.
- Do not prise off the pulley with a screwdriver.



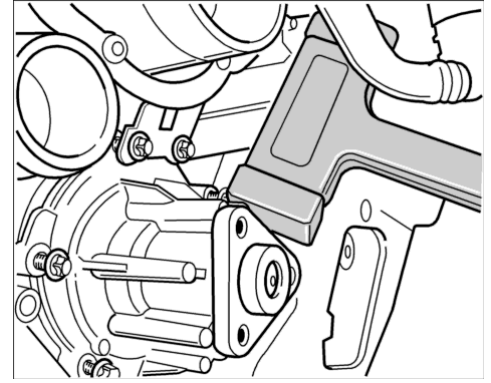
Fastening screws for pulley

6. Remove the 3 loosened fastening screws on the pulley and remove the pulley.

7. Remove the eight fastening screws on the coolant pump and remove the pump. If the pump is stuck, loosen it by gently tapping with a plastic hammer.



Fastening screws for coolant pump



Loosening the coolant pump with a plastic hammer

Installing coolant pump

Installing coolant pump

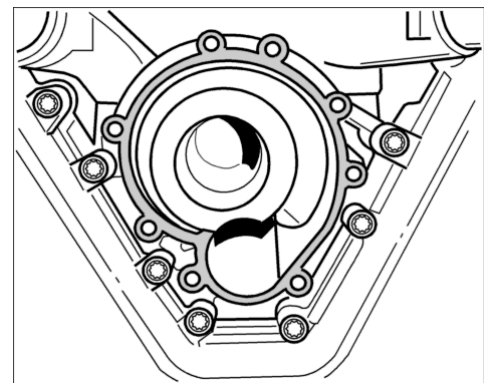


ATTENTION

Risk of damaging pulley!

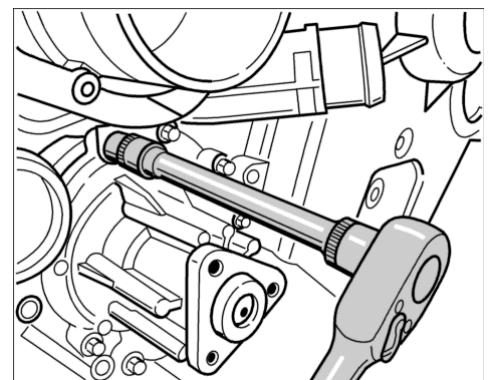
- The pulleys of the engine accessories are made of plastic. Do not use damaged pulleys.
- The pulley is sensitive to impacts.
- Do not prise off the pulley with a screwdriver.

1. Clean sealing surfaces. Mount new sheetmetal seal on the coolant pump. Slide the new sheetmetal seal over the dowel pins.

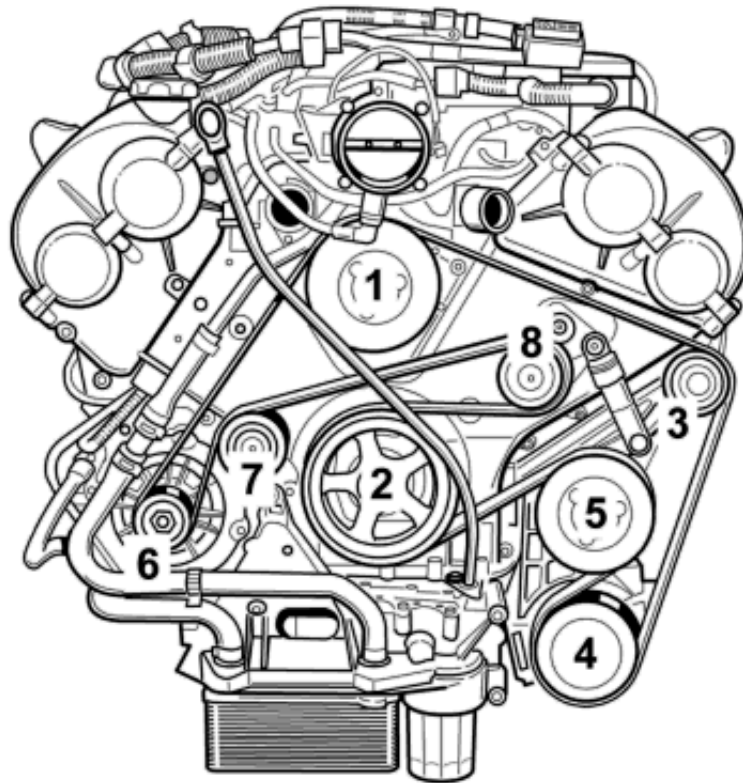


New sheetmetal seal on the coolant pump

2. Tighten the 8 fastening screws. → **Tightening torque: 7.5 ftlb.** Mount the sheetmetal holder for the cable duct using the two upper fastening screws.
3. Fit the pulley on the coolant pump. Screw in the three fastening screws by hand.
4. Mount drive belt **-as shown in the following-**. To do this, turn the belt tensioner clockwise and thread the drive belt around all the pulleys. Then carefully relieve the tensioning roller. → 137819 Removing and installing drive belt - chapter on "Installing" [9PAAF1 9PAAJ1] → 137819 Removing and installing drive belt - chapter on "Installing" [9PAAE1 9PAAE7]



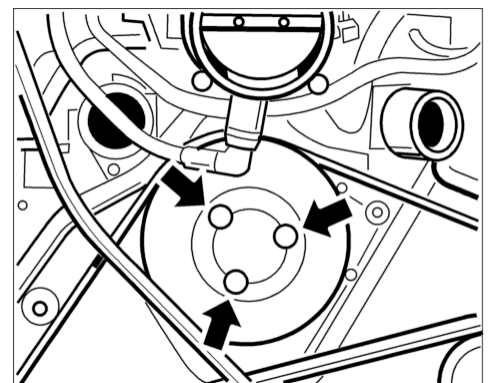
Mount the fastening screws for the coolant pump



Installation sequence for drive belt

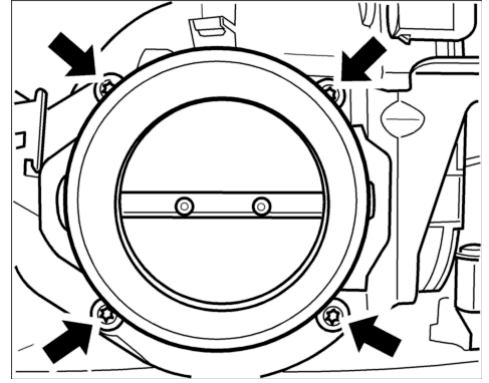
5. Check whether the drive belt is correctly installed.

6. Tighten the three fastening screws of the coolant pump pulley. → **Tightening torque: 17 ftlb.**



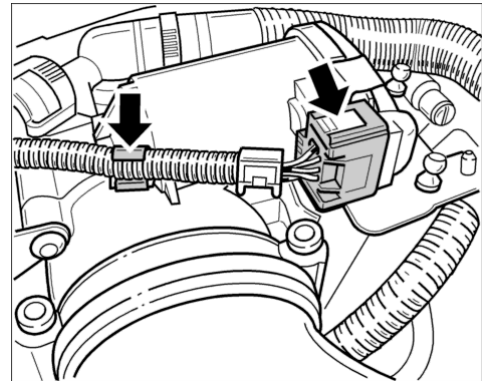
Fastening screws for coolant pump pulley

7. Tighten the throttle adjuster with new seal. → **Tightening torque: 17 ftlb.**



Fastening screws on throttle adjuster

8. Connect the throttle adjuster. The connector must engage audibly. Clip the connecting cable into the sheetmetal holder.



Connecting cable to throttle adjuster

Subsequent work

Subsequent work

1. Install the radiator frame. → 192019 Removing and installing cooling fan housing (radiator frame) - chapter on "Installing" [9PAAE1 9PAAE7 9PAAF1] → 192019 23 Removing and installing cooling fan housing (radiator frame) - chapter on "Installing" [9PAAJ1]
2. Fill and bleed the cooling system according to instructions. → 193817 Draining and filling coolant (includes bleeding) - chapter on "Filling"

9PAAE1, 9PAAE7, 9PAAF1, 9PAAJ1

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