

2004 Porsche Cayenne Turbo (9PA) V8-4.5L Turbo

Vehicle > Body and Frame > Exterior Moulding / Trim > Underbody Cover > Service and Repair > Removal and Replacement

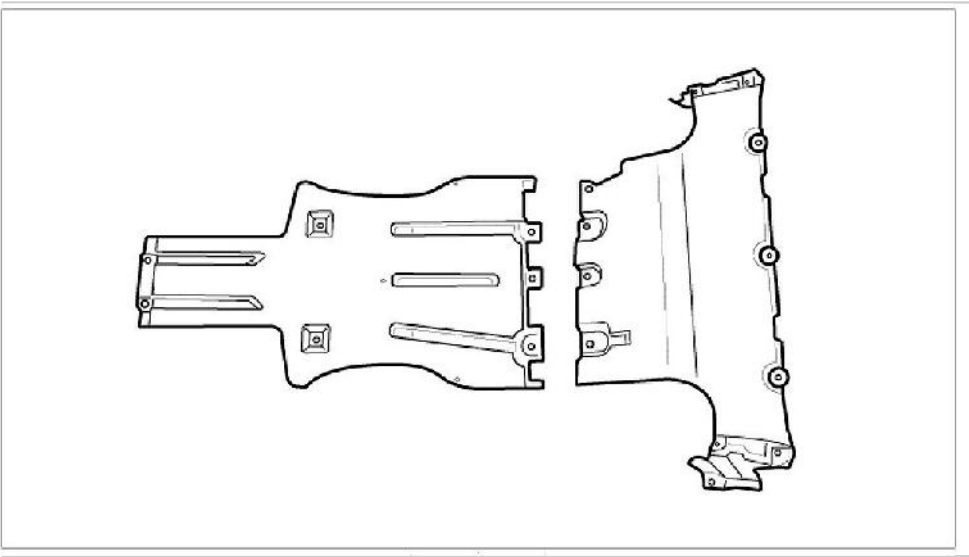
REMOVING AND INSTALLING ENGINE GUARD

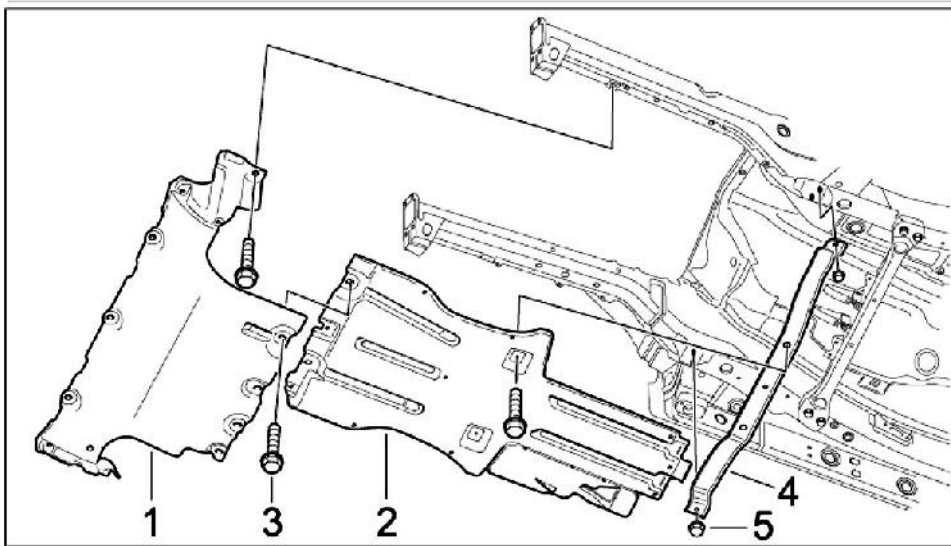
Removing and Installing Engine Guard

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Engine guard	M6	Tightening torque	6.5 ftlb.		

Technical Values

Information



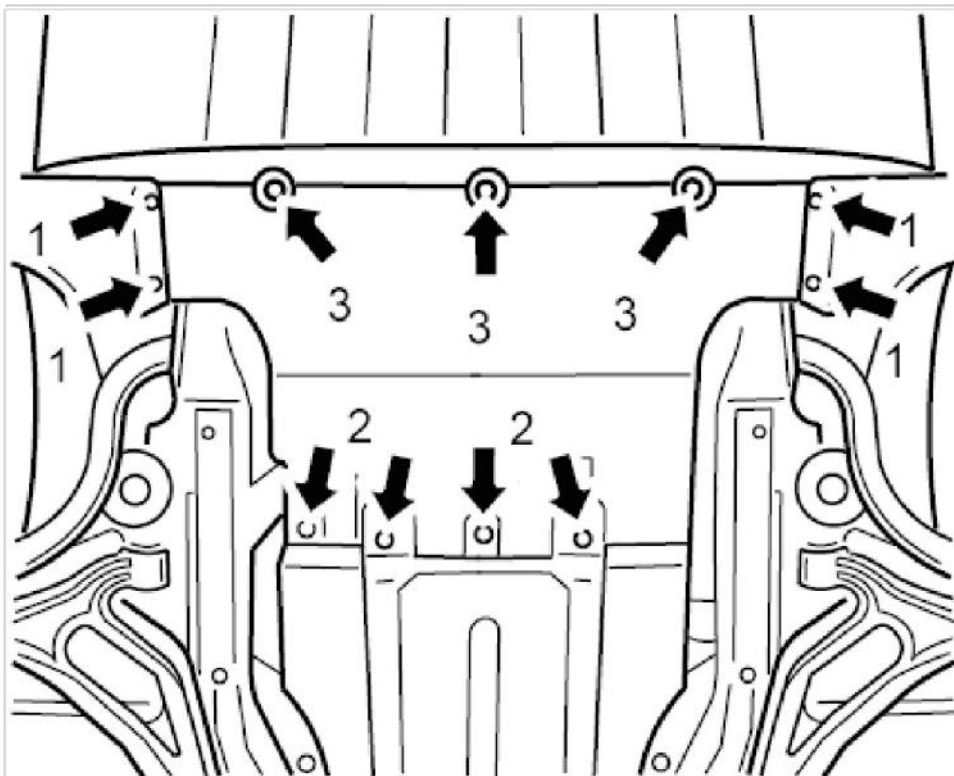


Engine cover screws

- 1 - Engine guard, front
- 2 - Engine guard
- 3 - Fastening screw M6
- 4 - Transverse strut
- 5 - Fastening nut M6

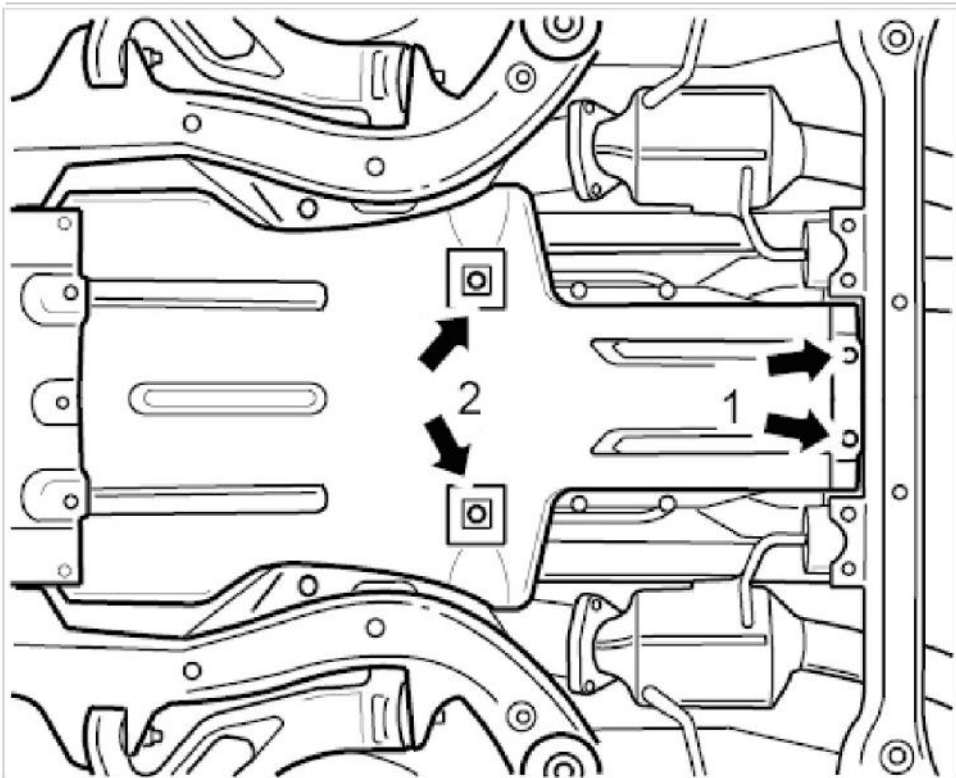
Overview

Removing Engine Guard



Front screws

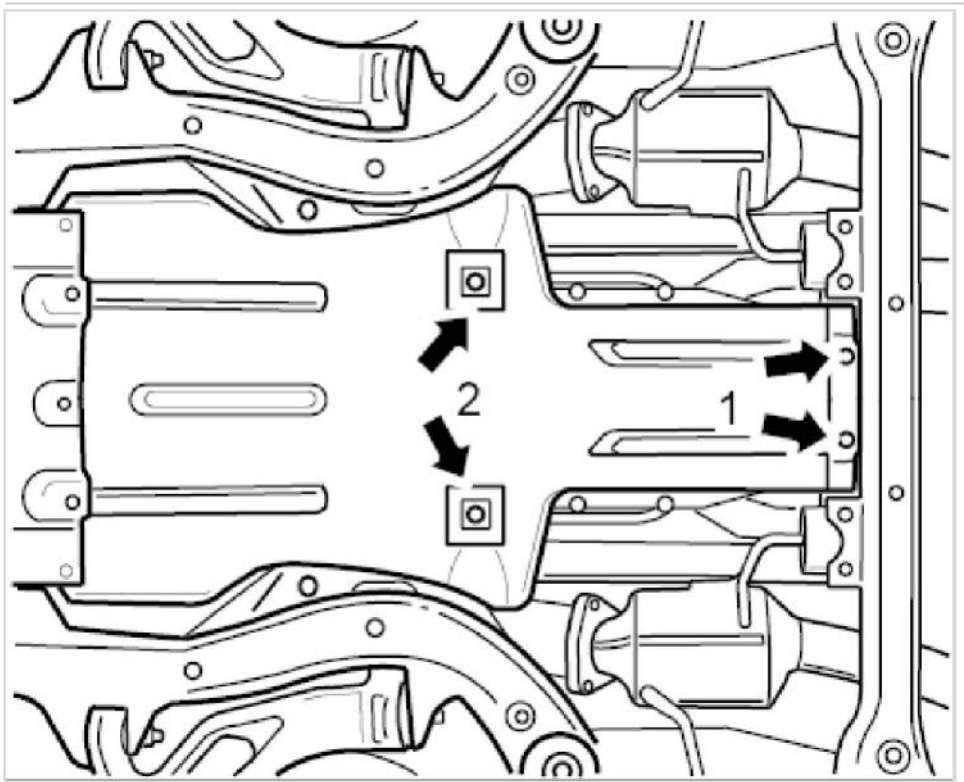
1. Remove front engine guard. To do this, loosen the screws -1- at the front and side. Then loosen the rear -2- and front screws -3-.



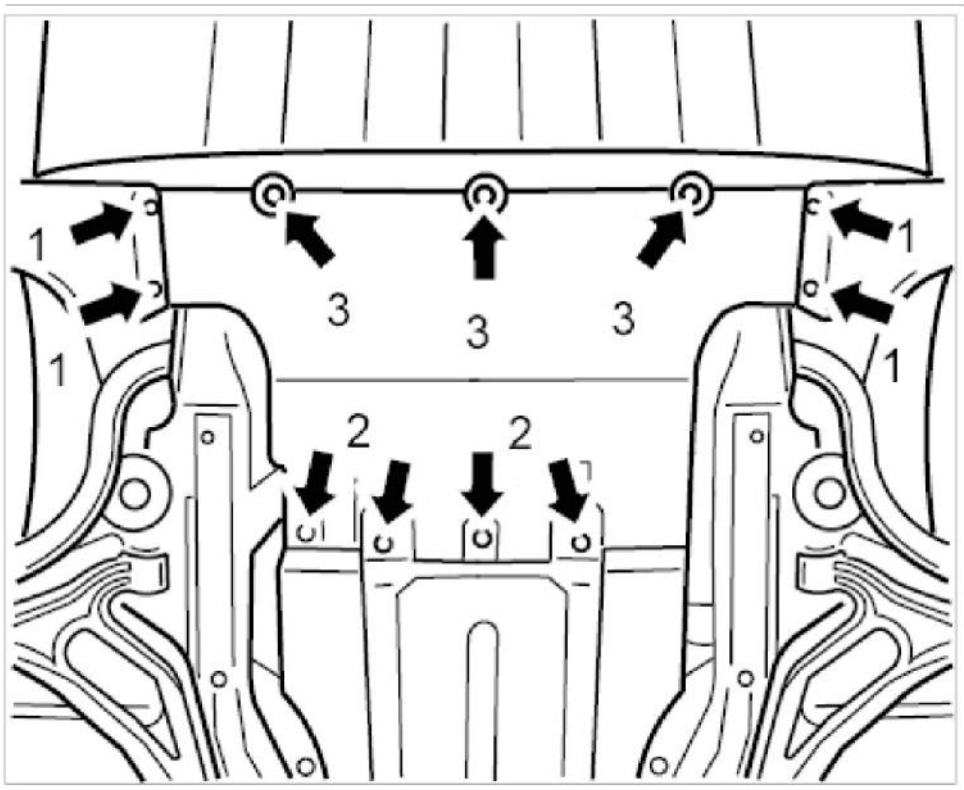
Rear screws

2. Remove rear engine guard. To do this, loosen the fastening screws on the transmission cross member -1- and the screws on the traverse strut -2-.

Installing Engine Guard



1. Install the rear engine guard. To do this, screw in the front fastening screws -2- and rear fastening screws -1-.

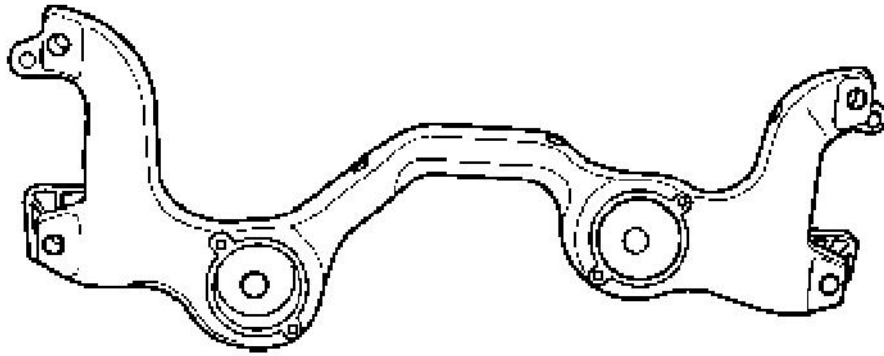


2. Tighten front fastening screws -3- and rear fastening screws -2- and -1-.
Tightening torque: **6.5 ft lb**

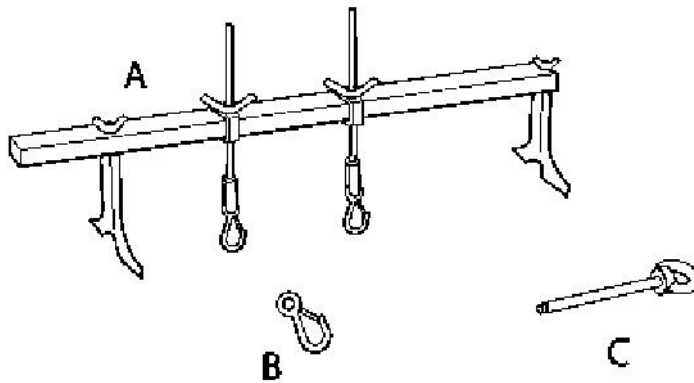
2004 Porsche Cayenne Turbo (9PA) V8-4.5L Turbo

Vehicle > Steering and Suspension > Suspension > Cross-Member > Front Cross-Member > Service and Repair

PROCEDURES

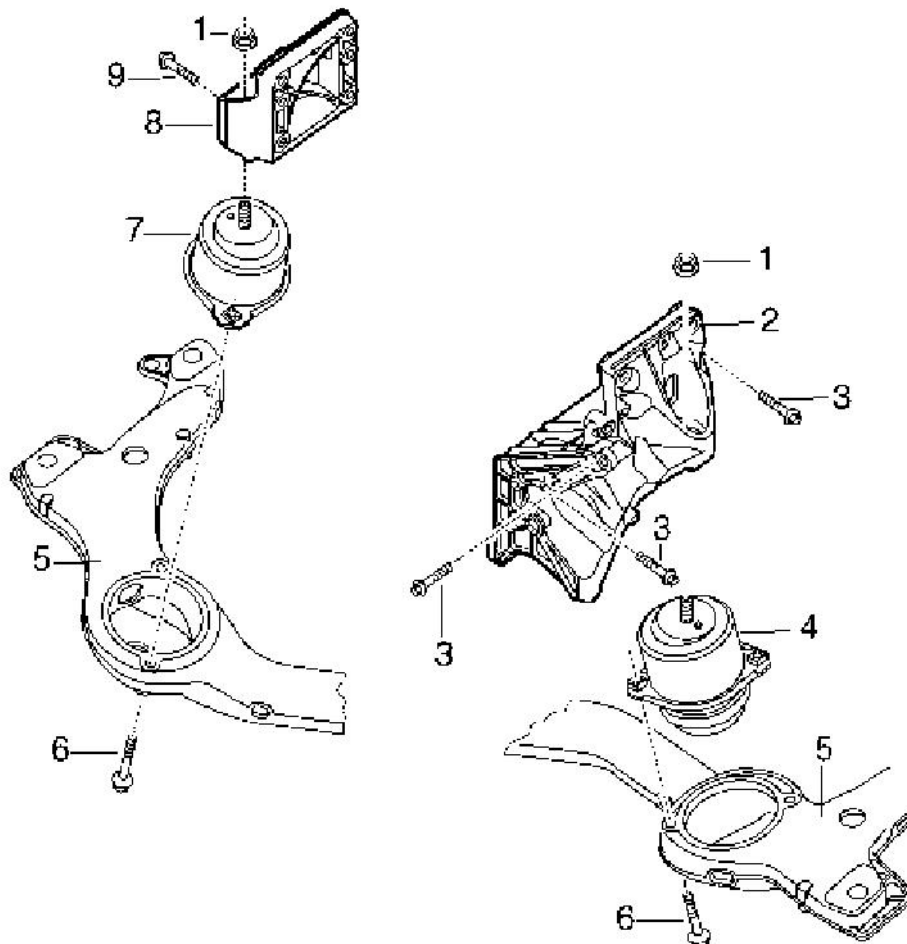


Removing and installing engine carrier



Item	Designation of the tool
-A-	
-B-	Spring hook or chain
-C-	

Special tools required



No.	Designation	Qty.	Removal	Installation
-1-	Fastening nut, M12 x 1.5 x 10.9	2		Replace: tightening torque: 75 Nm (56 ftlb.)
-2-	Bracket for auxiliary units	1		
-3-	Fastening screw, M10 x 45	10		
-4-	Hydraulic mount, left	1		Align using engine carrier -5--1-
-5-	Engine carrier	1		
-6-	Fastening screw	4		60 Nm (44 ftlb.)
-7-	Hydraulic mount, right	1		Align using engine carrier -5--1-
-8-	Engine carrier, right	1		
-9-	Fastening screw, M10 x 45	6		60 Nm (44 ftlb.)

Component overview

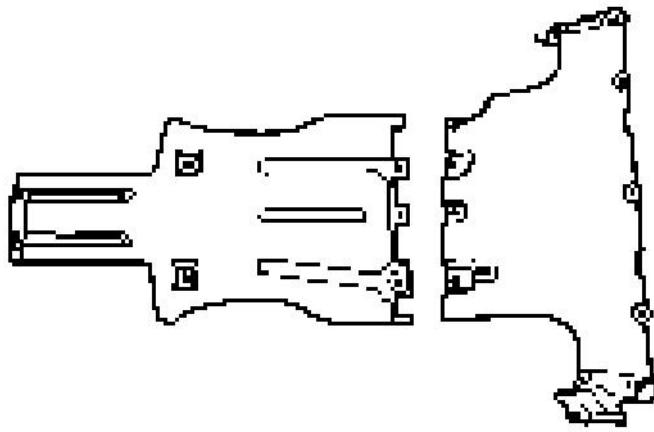
Removing engine carrier

Note: This task can only be performed if the engine has been removed or suspended on the body.

Caution: Danger of injury!

- ^ When working on the engine suspension, the engine must be appropriately secured against falling or lowering.
- ^ Never use defective lifting equipment.
- ^ Only use lifting equipment tested and approved by Porsche.
- ^ The components are very heavy. There is a danger of crushing.
- ^ Wear protective gloves.
- ^ Please observe general warning notes.

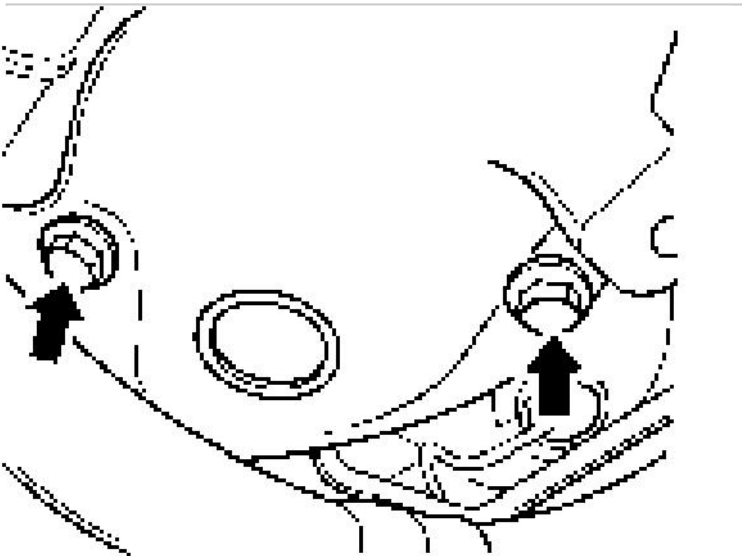
1. Support the engine on the body. Supporting the engine on the body.



2. Remove engine guard.
3. Remove front suspension subframe. Do not use the fastening screws again.

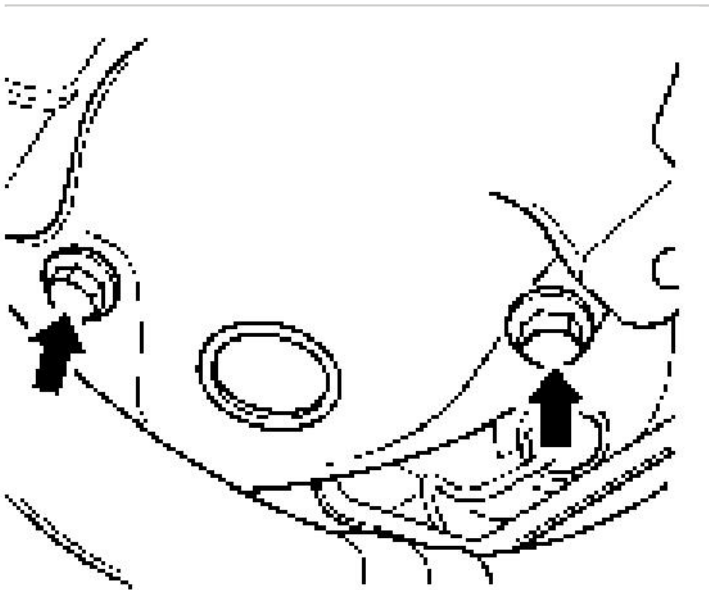
Note:

- ^ Do not undo the engine mounts on the engine.
- ^ If the engine mounts have been undone on the engine, they must be aligned using the engine carrier.



4. Undo the two fastening screws to the left and right on the hydraulic mounts.
5. Undo the two fastening screws from the engine carrier to the body and remove the engine carrier.

Installing engine carrier



1. Install engine carrier. To do this, first position the fastening screws (M10 x 45) on the hydraulic mounts and tighten them. Tightening torque: **60 Nm (44 ft. lbs.)**
2. Tighten the new fastening screws on the engine carrier. Tightening torque: **100 Nm (74 ft. lbs.) + 180°**.
3. Install the suspension subframe.
4. Fit engine guard.

Location	Thread	Tightening torque [Nm] (ftlb.)
Suspension subframe screws, front	M14 x 1 x 115	100 (74) + 180° torque angle; replace screw
Suspension subframe screws, rear	M14 x 1 x 135	100 (74) + 180° torque angle; replace screw
Engine carrier to engine mount	M10 x 45	60 Nm (44 ftlb.)
Engine carrier to body	M14	100 (74) + 180° torque angle; replace screw
Cardan shaft to transfer box	M12 x 1.5	75 (56)
Steering column to steering gear	M10 x 35	35 (26) + 90° torque angle; replace screw
Heat shield to steering gear	M6 x 16	10 (7.5)
Wheel bolts	M14 x 1 x 51	160 (118)
Torque support to body	M10 x 90	60 (44)

Location	Thread	Tightening torque [Nm] (ftlb.)
Torque support to engine	M10 x 70	60 (44)

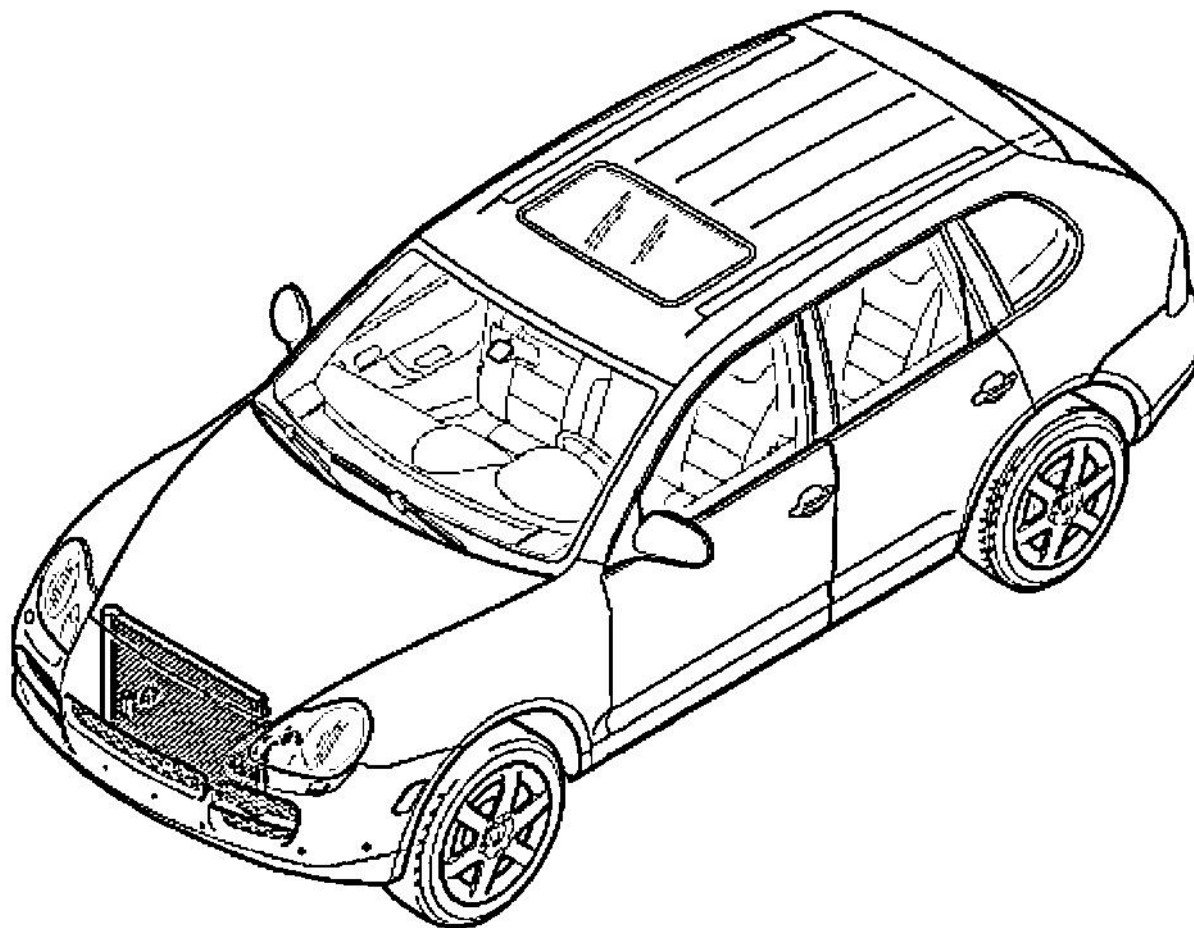
Tightening torques

2004 Porsche Cayenne Turbo (9PA) V8-4.5L Turbo

Vehicle > Heating and Air Conditioning > Condenser HVAC > Service and Repair

PROCEDURES

Removing and Installing Condenser



Removing the Condenser

WARNING: Danger of injury. Safety regulations should be strictly observed when working on air-conditioned vehicles

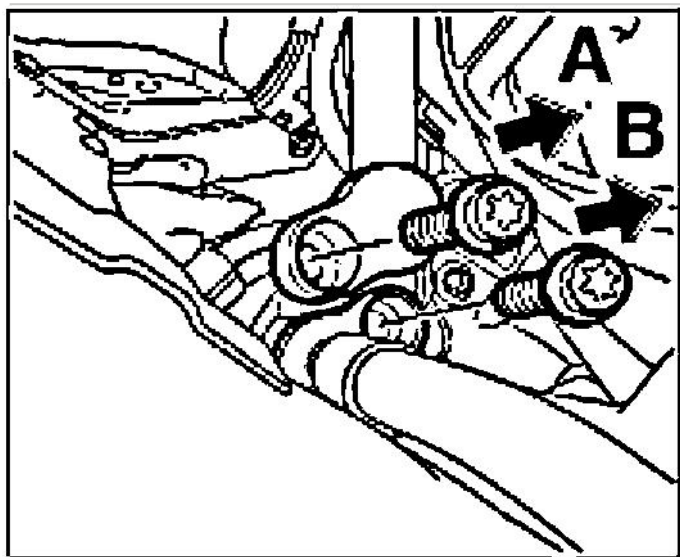
and dealing with refrigerant.

Refer to, Safety regulations for working on air-conditioned vehicles and dealing with refrigerant R134a.

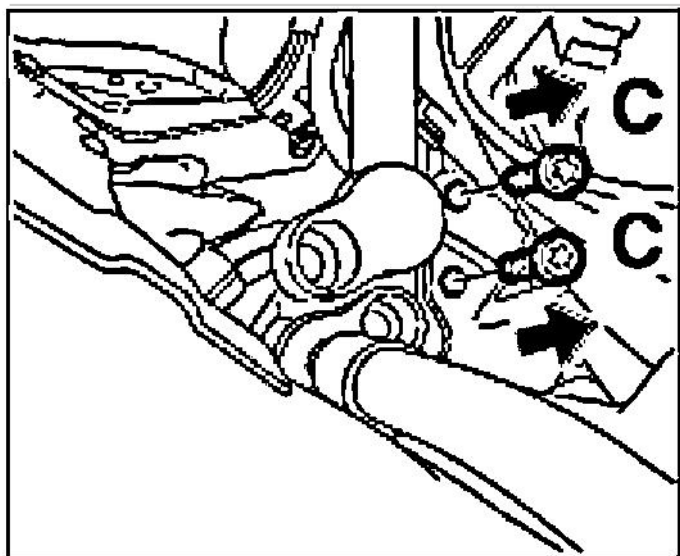
Refer to, Safety regulations for extraction and filling systems.

Refer to, Instructions for repairing air-conditioning systems and storing spare parts.

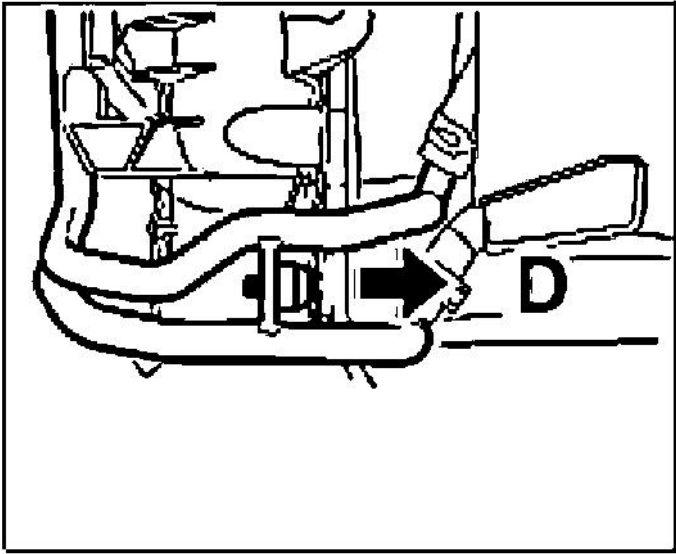
- Remove refrigerant by suction.
- Remove front cover for underbody.
- Remove cross member.



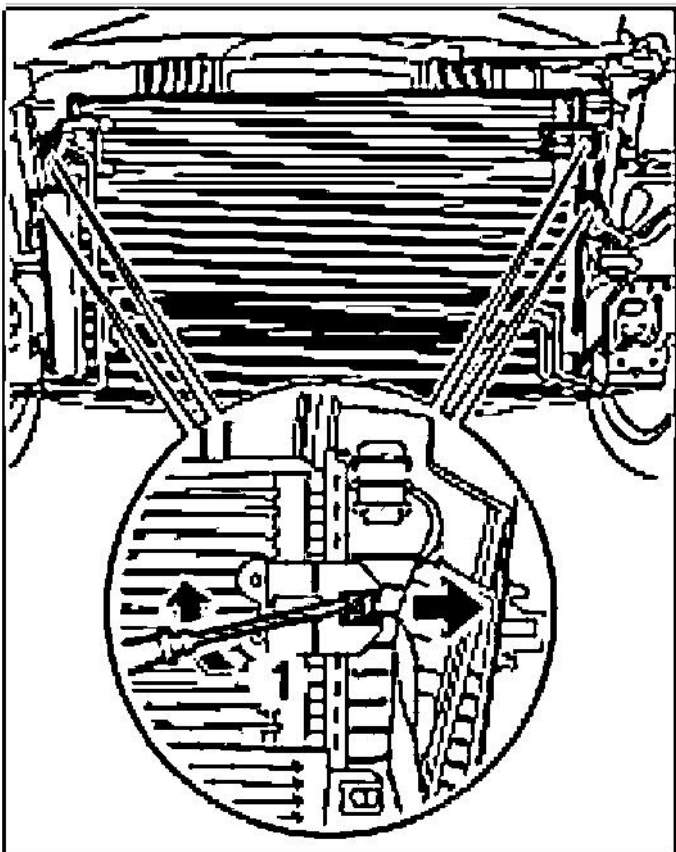
1. Unscrew the fastening screws on the condenser's air conditioning lines, withdraw the lines -A, B- and lock air seal.



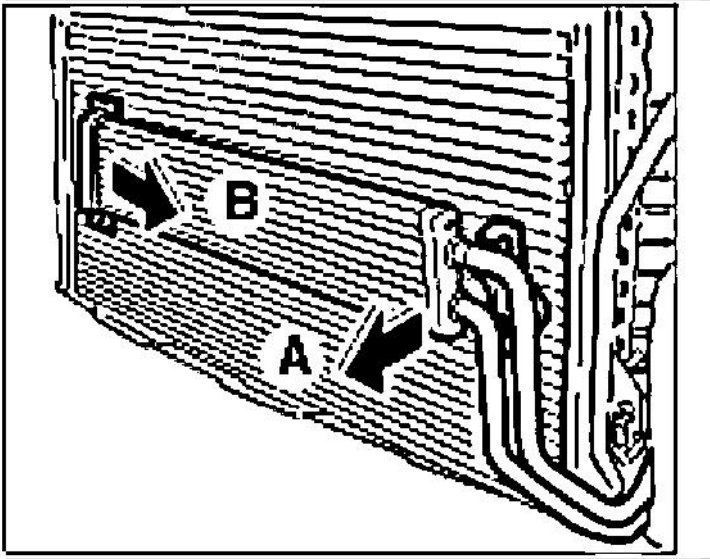
2. Unscrew the two fastening screws -C- condenser to radiator-refrigerant (to the left).



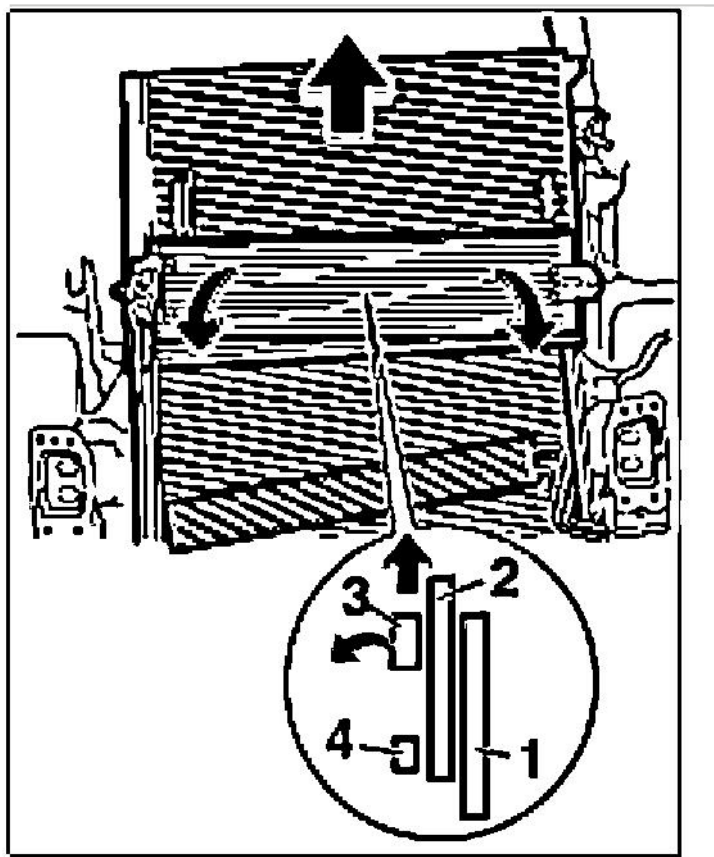
3. Unscrew the fastening screw -D- (to the left) radiator-steering hydraulic oil to radiator-refrigerant lines.



4. Lift the two fuses on the radiator automatism-transmission oil and the two fuses on the air conditioning condenser with a screwdriver -1- and push downwards -arrow-.



5. Remove radiator automatism-transmission oil on the condenser -A- and pull out of the holder -B-.

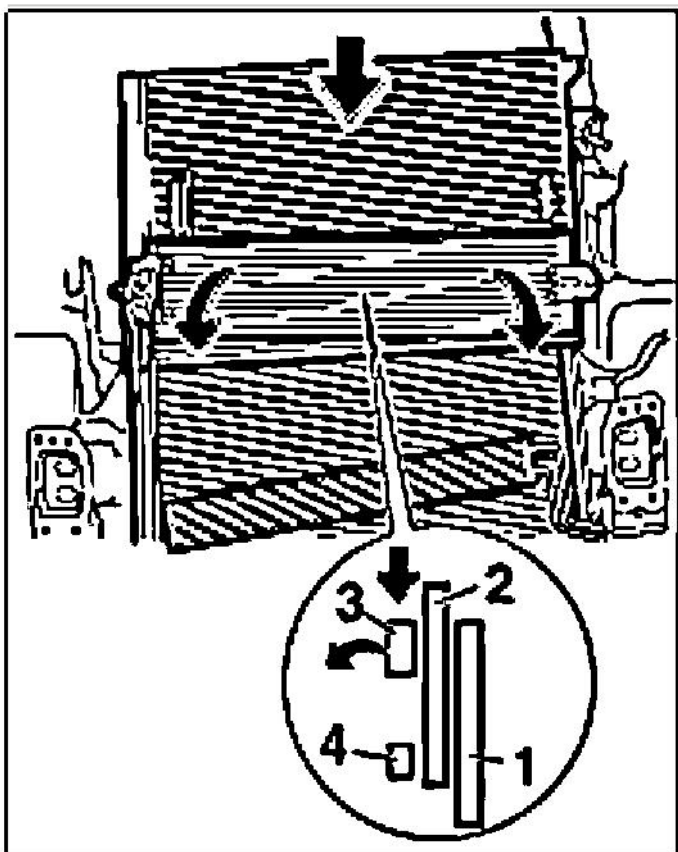


6. Carefully pull the radiator automatism-transmission oil -3- forwards taking care not to distort the lines.

- 1- Radiator-refrigerant
- 2- Condenser
- 3- Radiator automatism-transmission oil
- 4- Radiator-steering hydraulic oil

7. Carefully remove the condenser upwards -2- making sure that the other radiators are not damaged by the edges and corners of the condenser.

Installing the Condenser



1. Carefully pull the radiator automatism-transmission oil -3- forwards taking care not to distort the lines.

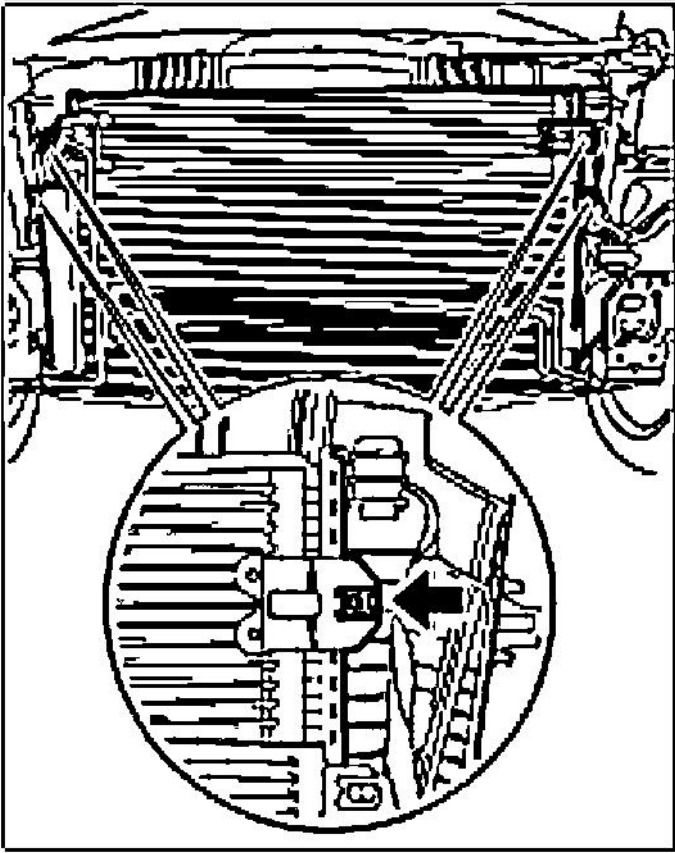
-1- Radiator-refrigerant

-2- Condenser

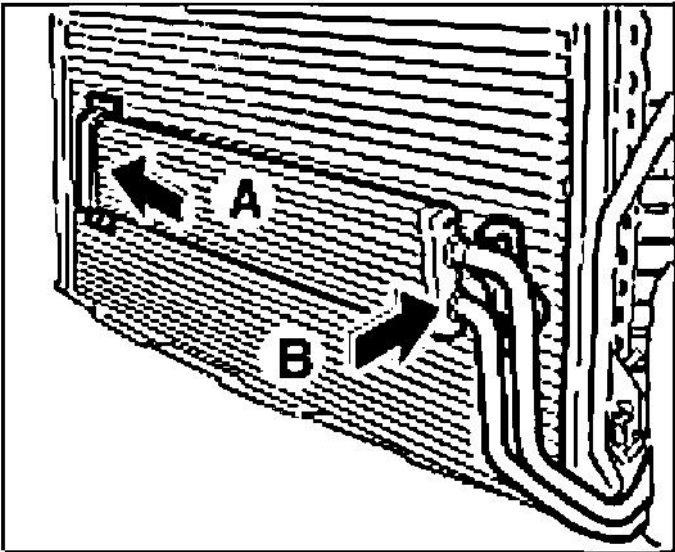
-3- Radiator automatism-transmission oil

-4- Radiator-steering hydraulic oil

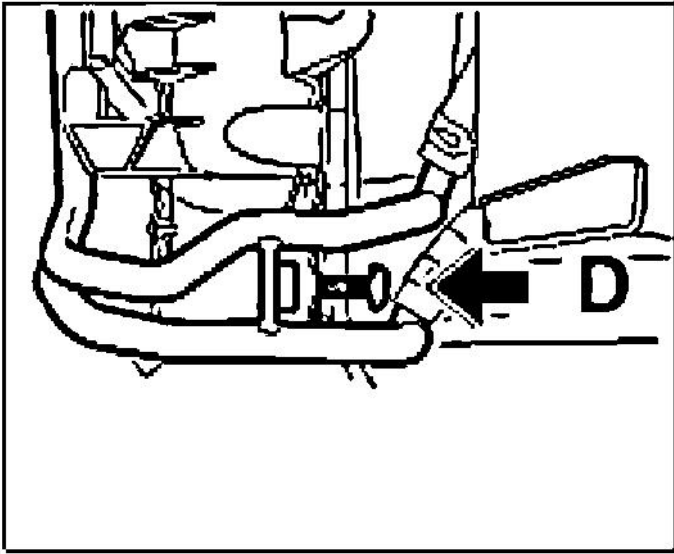
2. Carefully insert the condenser -2- between the radiators -1, 3, 4- making sure that the other radiators are not damaged by the edges and corners of the condenser.



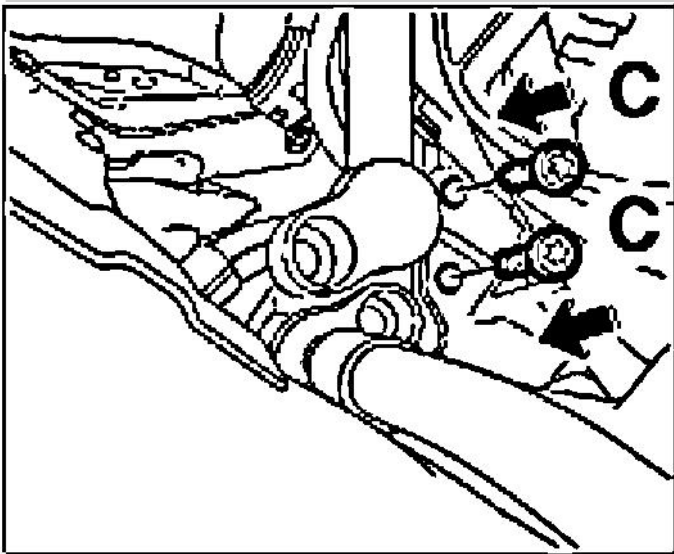
3. Insert the condenser and the radiator automatism-transmission oil into the mounting points and clip the two safety clips onto the condenser and the radiator-refrigerant.



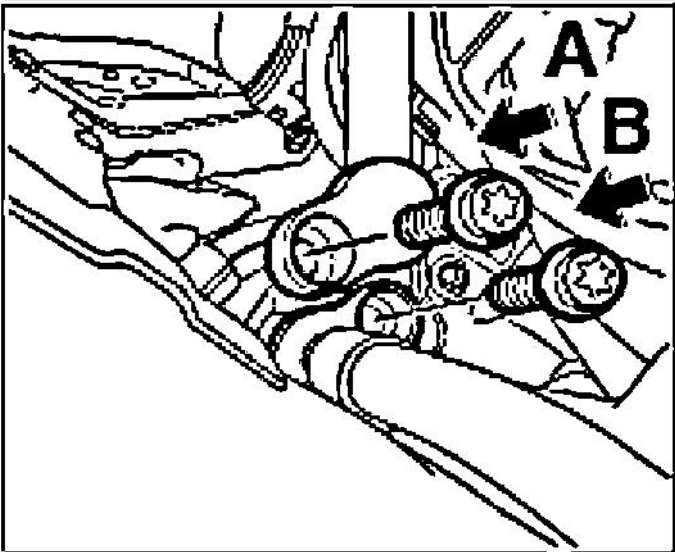
4. Insert the radiator automatism-transmission oil into the holder on the condenser -A- and attach the lines to the holder -B-.



5. Screw in the fastening screw -D- (to the left) radiator-steering hydraulic oil to radiator-refrigerant lines. Refer to tightening torques.



6. Screw in the two fastening screws -C- condenser to radiator-refrigerant (to the left). Refer to tightening torques.



7. Position the refrigerant lines and attach to the condenser with the fastening screws -A, B-. Refer to, Tightening torque.
- Fill refrigerant.
 - Install cross member.
 - Install front cover for underbody.

Tightening Torques

Location	Illustration	Thread	Tightening torque	
Fastening screw lines radiator automatism-transmission oil to radiator-refrigerant	-D-	M6	8 (5.92 ftlb)	Nm (ftlb.)
Fastening screws condenser to radiator-refrigerant	-C-	M6	8 (5.92 ftlb)	Nm (ftlb.)
Fastening screws refrigerant line to condenser	-A, B-	M8	12 (8.88 ftlb)	Nm (ftlb.)