

- Catalytic converter
- Front exhaust pipe

⚠When loosening and removing the axle shaft, the wheel bearing must NOT be under load (vehicle must not be standing on its wheels)

- Right and left axle shafts
- Unbolt flexible coupling for driveshaft, push driveshaft as far back as possible

⚠The oil seal in the flange of the driveshaft must NOT be damaged. The driveshaft must be replaced if the oil seal is damaged

- Pendulum support
6. Attach engine bracket T10102 or equivalent to cylinder block
 7. Install engine/transmission jack to engine bracket and raise assembly slightly
 8. Remove engine/transmission mounting bolts
 9. Pull engine/transmission assembly as far forward as possible and carefully lower

To install:

10. Installation is the reverse of the removal procedure, while using the torque values below. Note the following engine mounting adjustment procedure.

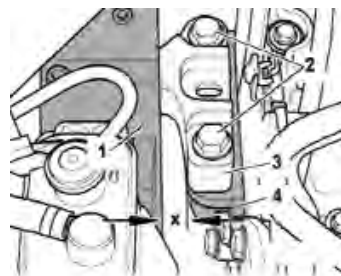
11. Adjust the engine mounting so that distance "X" (on the right-hand mounting) is about 0.51" (13 mm). It should be possible to insert a 0.47" (12 mm) flat metal bar without any difficulty.

12. To move the engine within the engine console, first loosen bolts on the left and right engine supports by about 2 turns each

13. If the gap is too narrow or too wide, proceed as follows: Remove air hose from air mass meter and disconnect electrical connectors.

14. Remove air cleaner housing

15. Raise engine slightly, taking up the weight evenly on both sides



1. Engine mount
2. Bolts
3. Support arm
4. Engine support

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Adjusting engine mounting—3.2L engine TT

16. Loosen bolts on left and right-hand support arms by about two turns each

17. Insert a metal bar between engine console and support arm, then move engine until gap "a" measures 0.51" (13 mm)

18. Tighten (by hand) all four bolts and left and right-hand support arms, then final tighten all four bolts to 63 ft. lbs. (85 Nm)

19. Transmission to engine block

- M12 bolts 59 ft. lbs (80 Nm)
- M10 bolts 30 ft. lbs (40 Nm)

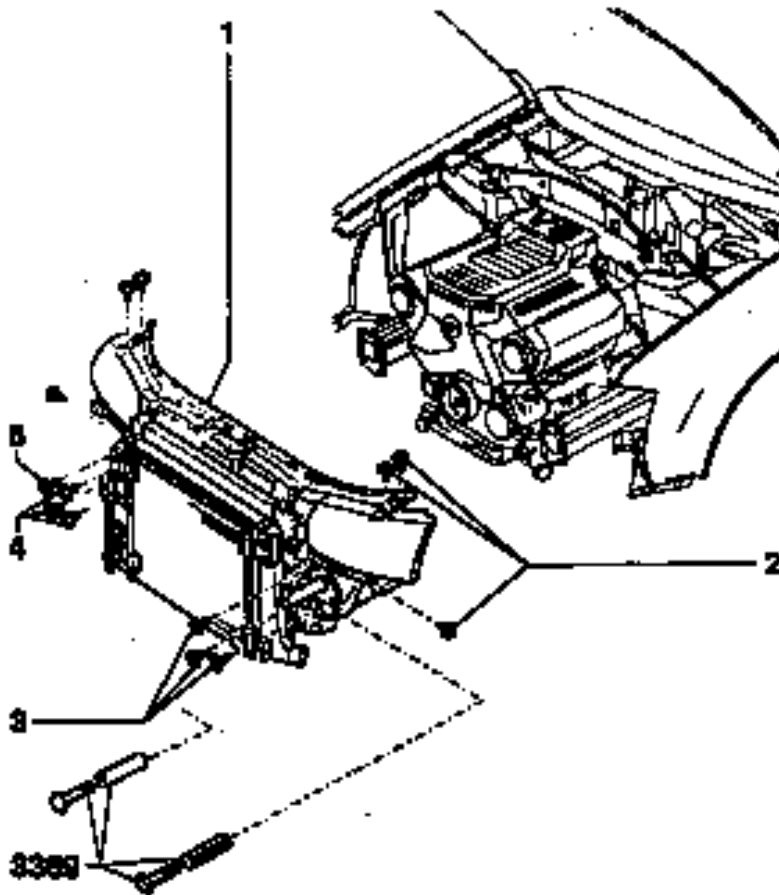
20. Other bolts/nuts

- M6 7 ft. lbs (10 Nm)
- M8 15 ft. lbs (20 Nm)
- M10 33 ft. lbs (45 Nm)
- M12 48 ft. lbs (65 Nm)
- Flexible coupling to bevel box 44 ft. lbs (60 Nm)
- Exhaust pipe to manifold 30 ft. lbs (40 Nm)
- Exhaust pipe to catalytic converter 18 ft. lbs (25 Nm)
- Pendulum support to transmission 30 ft. lbs (40 Nm) + 90° (1/4 turn)
- Pendulum support to subframe 15 ft. lbs (20 Nm) + 90° (1/4 turn)

2.7L Engine

⚠The engine is removed without the transaxle, through the top of the engine compartment. The front bumper and the front lock carrier assembly must be removed.

1. Before servicing the vehicle, refer to the precautions in the beginning of this section.
2. Relieve the fuel system pressure.
3. Drain the engine coolant.
4. Remove or disconnect the following:
 - Negative battery cable
 - Plenum cover
 - Engine covers
 - Engine undercover
 - Air filter cover
 - Soundproofing material holder and bracket from the engine mount
5. Remove the front bumper as follows:
 - Front wheels
 - Fasteners attaching the wheel housing lining to the front bumper
 - Bumper cover flanged nuts
 - Lower air grille assemblies



The hood lock carrier assembly (1), fender fasteners (2) and energy absorbing strut fasteners (3). Tool 3369 is used when placing the carrier in the service position—A6 models

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- Front bumper mounting bolts
 - Front bumper
6. Remove or disconnect the following:
- Hood release cable
 - Air intake duct for the air cleaner housing
 - Wring connectors for the horns, headlights and electrical equipment mounted on the front hood lock carrier assembly
 - Hood lock carrier assembly to the front fenders fasteners
 - Radiator coolant hoses
 - A/C condenser from the brackets and move it aside with the hoses attached

[[CAUTION

The condenser lines must not be bent or kinked.

- Power steering cooling line brackets located on the engine support and the transmission and move them aside with the power steering hoses attached
- Cooling lines, if equipped with an automatic transmission
- Hood seal at the front fenders
- Energy absorbing bumper struts to the carrier fasteners
- Lock carrier assembly
- Viscous fan left hand threaded nut
- Accessory drive belt
- Coolant reservoir
- Valve cover for cylinder bank 4-6
- Coolant Hoses
- Wiring harnesses
- Air distributor
- Fuel lines
- Air filter
- Pressure hoses from charge air cooler
- Power steering hose
- Heat sensor from right hand turbocharger
- Heat shield from both turbochargers
- Wiper arms and water deflector trim
- ECM retaining bracket and ECM
- Brake booster hose
- Firewall ground
- Bulkhead connectors
- Heat exchanger coolant hoses
- Turbocharger and charge air cooler pressure hoses
- Starter cable clip
- Ground at engine support
- Torque support below crank pulley
- Oil filter

- Oil cooler
- Heat shield above both drive axles
- Left and right exhaust pipes from turbocharger
- Air conditioning condenser brackets and move the condenser aside with the hoses attached
- Alternator
- Air conditioning compressor and move it aside with the hoses connected
- Air intake pipe
- Both wheels
- Starter
- Flexplate to torque converter bolts through the starter opening, if equipped with an automatic transmission
- Exhaust system from the manifolds
- Mark positions of engine mountings on both sides
- Nuts at engine mountings
- Engine-to-transmission bolts

7. Position an Engine Support Bridge tool 10-222A to the bolted flanges of the fenders with the spindle facing forward.

8. Connect the Engine Support Bridge tool 10-222A using Adapter tool 10-222A1 and Extension tool 10-222A3 and support the transaxle.

9. Attach a Engine Sling tool 2024A to the right rear and left front of the engine.

10. Attach an engine hoist to the sling.

11. Support transmission with transmission jack Lift the engine slightly.

12. Check that all hoses, wires, cables and mounts have been disconnected and carefully lift the engine in conjunction with the transmission to clear the right engine mount.

13. Pull the engine forward until it is separated from the transmission.

14. After the engine has been separated from the transmission, lift the engine up and out of the vehicle.

To install:

15. Installation is the reverse of the removal procedure, while using the following torque values:

- Engine mount bolts: 33 ft. lbs. (45 Nm).
- Flexplate-to-torque converter bolts: 63 ft. lbs. (85 Nm)
- Engine-to-transaxle bolts: 33 ft. lbs. (45 Nm) for the M10x 60 and M10x70 bolts, 48 ft. lbs. (65 Nm) for the M10x100 and all the M12 bolts
- General bolts: 18 ft. lbs. (24 Nm) for the M8 bolts, 33 ft. lbs. (45 Nm) for the M10 bolts and 44 ft. lbs. (60 Nm) for the M12 bolts

2.8L Engine

⊕The engine is removed without the transaxle, through the top of the engine compartment. On all A4 and A6 models, the front bumper and the front lock carrier assembly must be removed.

1. Before servicing the vehicle, refer to the precautions in the beginning of this section.

2. Relieve the fuel system pressure.

3. Drain the engine coolant.

4. Remove or disconnect the following:

- Negative battery cable

⊕On some vehicles the battery is located under the rear seat.

- Engine undercover
- Soundproofing material holder from the engine mount

5. Remove the front bumper and the hood lock carrier assembly, for A4 models and A6 models.

6. Remove the front bumper as follows:

7. Front wheels

8. Fasteners attaching the wheel housing lining to the front bumper

9. Bumper cover flanged nuts

10. Lower air grille assemblies

11. Front bumper mounting bolts

12. Front bumper

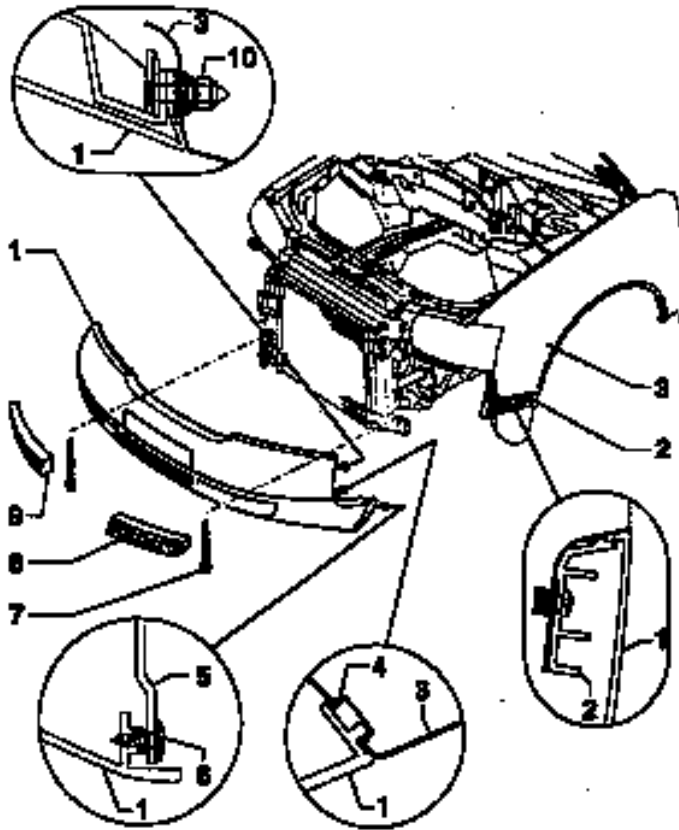
13. Remove or disconnect the following:

- Hood release cable
- Air intake duct for the air cleaner housing
- Wring connectors for the horns, headlights and electrical equipment mounted on the front hood lock carrier assembly
- Hood lock carrier assembly to the front fenders fasteners
- Radiator coolant hoses
- A/C condenser from the brackets and move it aside with the hoses attached

[[CAUTION

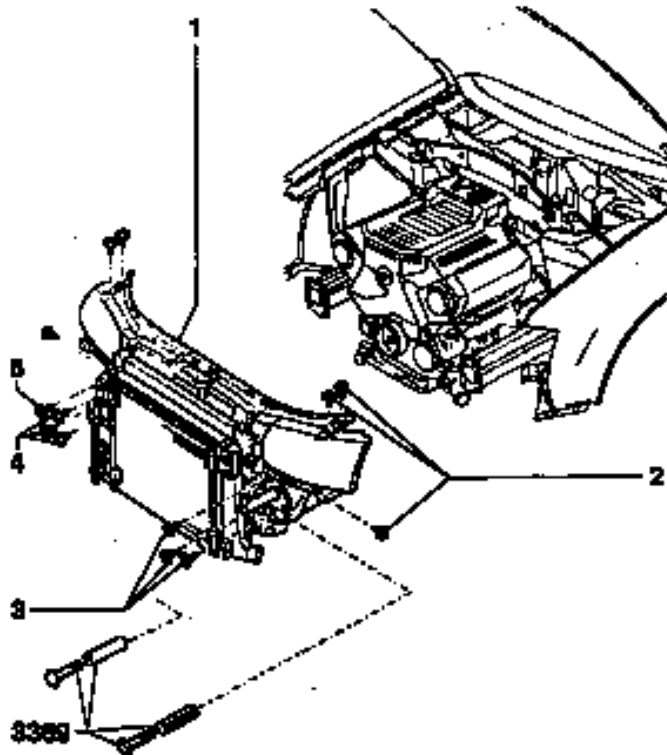
The condenser lines must not be bent or kinked.

- Power steering cooling line brackets located on the engine support and the transmission and move them aside with the power steering hoses attached
- Cooling lines, if equipped with an automatic transmission
- Hood seal at the front fenders
- Energy absorbing bumper struts to the carrier fasteners
- Carrier assembly



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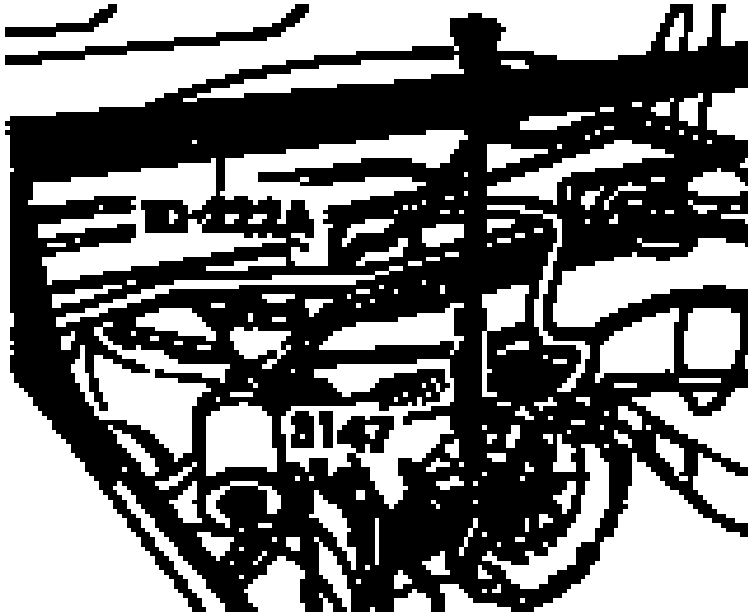
Bumper cover (1), saddle (2), fender (3), alignment tab (4), inner fender liner (5), liner fastener (6), bumper mounting fastener (7), air grilles (8, 9) and flanged nut (10)—A6 models



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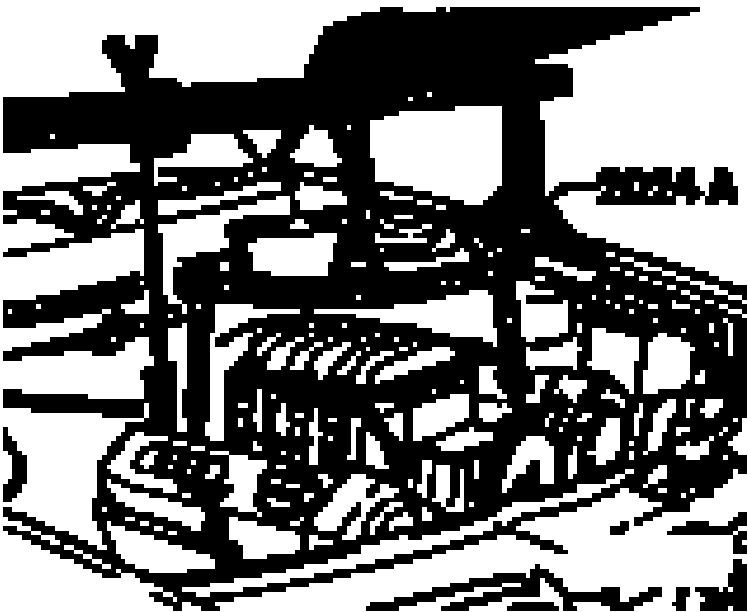
The hood lock carrier assembly (1), fender fasteners (2) and energy absorbing strut fasteners (3). Tool 3369 is used when placing the carrier in the service position—A6 models

- Stabilizer brace from the right rear of the engine compartment
 - Wiper arms and water deflector trim, on A4 and A6 models
 - Hoses
 - Wiring harnesses
 - Lines and cables for engine removal, as necessary
 - Accessory drive belt guard
 - Accessory drive belt
 - Front engine mount at the cross-member
 - Hydraulic lines that route above the cylinder head covers from the power steering pump
 - Ground strap from the right side engine support
 - Air intake for the alternator
 - Alternator
 - Air conditioning condenser brackets and move the condenser aside with the hoses attached
 - Air conditioning compressor and move it aside with the hoses connected
 - Exhaust system from the manifolds
 - Crossmember to access the catalytic converters and the exhaust pipe
 - Front exhaust pipes with the catalytic converters
 - Starter
 - Oil filter
 - Oil cooler
 - Flexplate to torque converter bolts through the starter opening, if equipped with an automatic transmission
 - Engine-to-transmission bolts
14. Position an Engine Support Bridge tool 10-222A to the bolted flanges of the fenders with the spindle facing forward.
 15. Attach the Support Adapter tool 3147 to the bolt hole above the starter mounting area in the transaxle bell housing.
 16. Connect the Engine Support Adapter tool 3147 to the Engine Support Bridge tool 10-222A using Adapter tool 2024A/1 and Extension tool 2024A/2 and support the transaxle.
 17. Attach a Engine Sling tool 2024A to the right rear and left front of the engine.
 18. Attach an engine hoist to the sling.
 19. Lift the engine slightly.
 20. Check that all hoses, wires, cables and mounts have been disconnected and carefully lift the engine in conjunction with the transmission to clear the right engine mount.
 21. Pull the engine forward until it is separated from the transmission.
 22. After the engine has been separated



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The engine support bridge and hook used to support the weight of the transmission for engine removal or weight of the engine for transmission removal—shown supporting the transmission with the engine removed



7923CG02

Be sure to attach the engine sling properly

from the transmission, lift the engine up and out of the vehicle.

To install:

23. Installation is the reverse of the removal procedure, while using the following torque values:

- Engine mounts bolts: 33 ft. lbs. (45 Nm).
- Flexplate-to-torque converter bolts: 63 ft. lbs. (85 Nm)
- Transaxle flange bolts: 18 ft. lbs.

(24 Nm) for the M8 bolts, 33 ft. lbs. (45 Nm) for the M10 bolts and 48 ft. lbs. (65 Nm) for the M12 bolts

3.0L Engine

⚠The engine is removed without the transaxle, through the front of the engine compartment. The front bumper and the front lock carrier assembly must be removed.

1. Before servicing the vehicle, refer to the precautions in the beginning of this section.
2. Relieve the fuel system pressure.
3. Drain the engine coolant.
4. Remove or disconnect the following:
 - Negative battery cable
 - Plenum cover
 - Both front wheels
 - Vehicles with auxiliary heater, remove bolts for exhaust pipe of parking heater/auxiliary heater at noise insulation
 - Carefully open cap of expansion tank
 - Engine undercover
 - Soundproofing material holder and bracket from the engine mount
5. Remove the front bumper as follows:
 - Front wheels
 - Fasteners attaching the wheel housing lining to the front bumper
 - Bumper cover flanged nuts
 - Lower air grille assemblies
 - Front bumper mounting bolts
 - Front bumper
6. Drain the engine coolant, then remove the lower radiator hose from the radiator.
7. Remove or disconnect the following, as equipped:
 - Remaining coolant hoses
 - Hood release cable
 - Air intake duct for the air cleaner housing
 - Wring connectors for the horns, headlights and other necessary electrical equipment that might obstruct removal
 - Hood lock carrier assembly to the front fenders fasteners
 - A/C condenser from the brackets and move it aside with the hoses attached

[[CAUTION

The condenser lines must not be bent or kinked.

- Power steering cooling line brackets located on the engine support and the transmission and move them aside with the power steering hoses attached
- Cooling lines, if equipped with an automatic transmission
- Hood seal at the front fenders
- Air guides from LH and RH of radiator
- Temperature sensor, PS cooling coil, and connectors from in front of radiator