

Audi > B4 > 1993 -1995

2.8 Liter V6 2V Engine Mechanical, Engine Code(s): AAH, AFC

10 - Engine - Assembly

Removing

- The engine is removed from above, after being separated from the transmission.

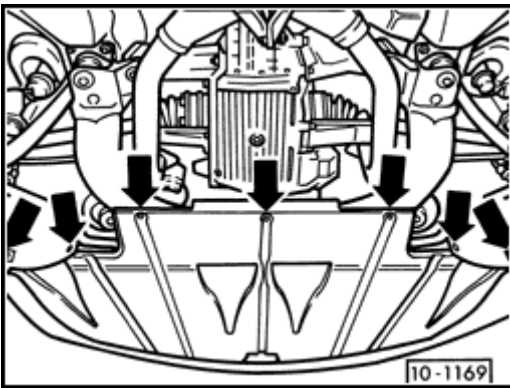
Note:

All tie wraps that are loosened or removed in order to remove the engine must be replaced or reinstalled in the same place when the engine is installed.

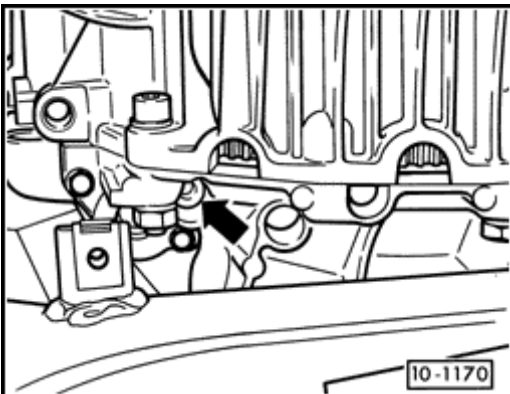
CAUTION!

Determine correct radio anti-theft coding before disconnecting the battery.

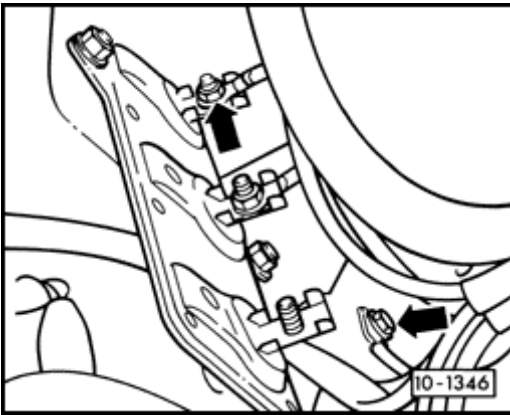
- Disconnect battery Ground (GND) strap.



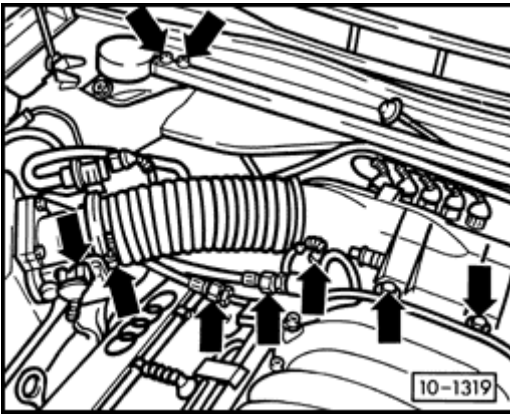
- Remove 7 fasteners for undertray (arrows).
- Disconnect undertray mounting bracket from engine mount.



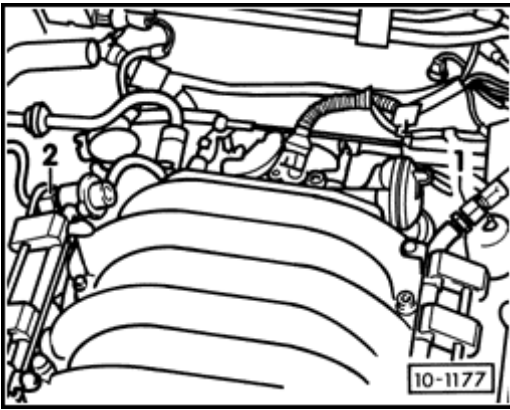
- Drain coolant from engine at drain plug (arrow).
- Drain coolant from radiator using drain plug at bottom left of radiator.



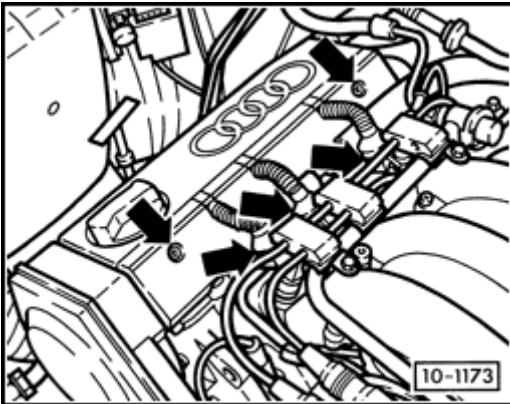
- Disconnect wiring at ballast resistor for radiator coolant fan and at ground point (arrow) on long member, and lay to one side.
- Remove 3 screws from coolant fan housing assembly at top of radiator.
- Remove fan housing assembly.



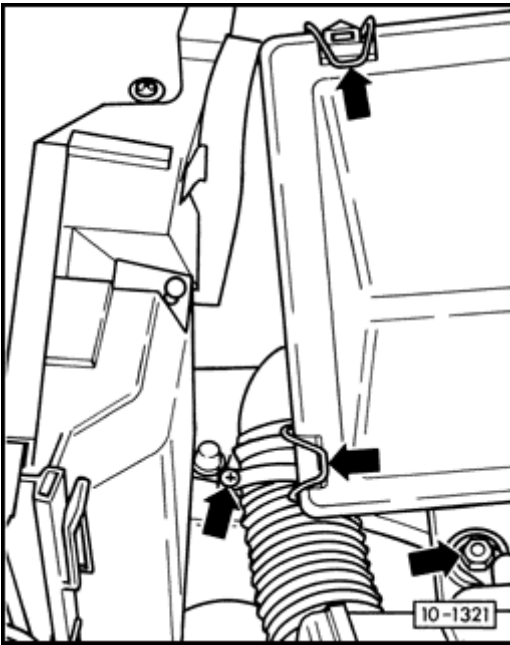
- Remove stabilizer brace from rear of engine compartment (arrows, top left).
- Disconnect intake air duct from intake manifold.
- Disconnect intake air duct from Mass Air Flow (MAF) sensor.
- Lift and push back intake air silencer and unclip both crankcase ventilation valves from silencer.
- Remove intake air silencer.
- Disconnect harness connectors from MAF sensor and Idle Air Control (IAC) valve.
- Remove EVAP canister purge regulator valve from MAF sensor bracket.



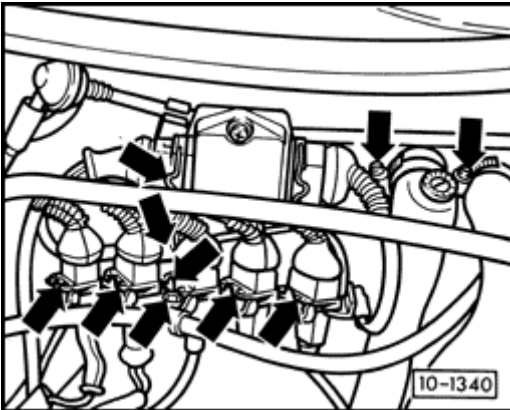
- Disconnect fuel supply and return lines.
- Disconnect vacuum lines from Intake Manifold Tuning (IMT) valve.
 - ◆ Blue line below
 - ◆ Green line from front
 - ◆ Intake Manifold Tuning (IMT) valve is located behind and below EVAP canister purge regulator valve.



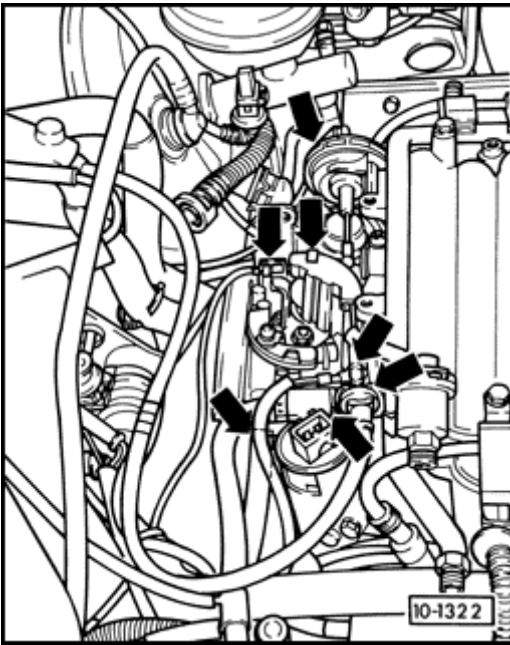
- Remove covers for fuel injection lines on left and right sides.
- Disconnect fuel injector harness connectors and set aside along with covers.



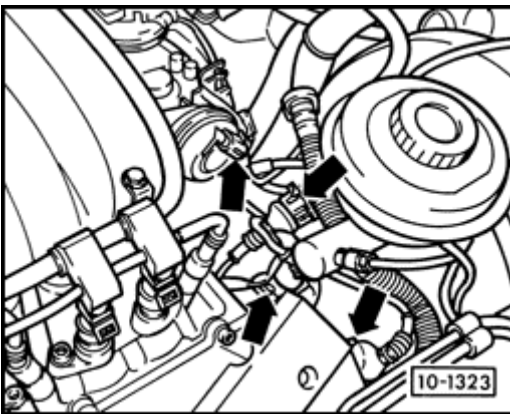
- Unclip upper section of air cleaner housing.
- Disconnect pre-heating hose and lower section of air cleaner housing, and remove.



- Disconnect harness connectors from connector bracket (next to engine compartment bulkhead).
- Remove tie wraps and straighten out wiring.
- Disconnect bracket for accelerator pedal cable sleeve from connector bracket.
- Disconnect coolant hoses that pass through bulkhead to heater core.

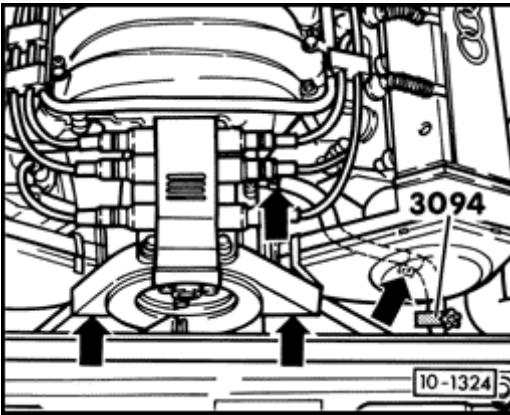


- Disconnect and expose accelerator pedal cable.
- Disconnect line from EVAP solenoid valve to throttle valve at throttle body.
- Disconnect ground strap from intake manifold (below accelerator pedal cable).
- Disconnect vacuum line brake booster at intake manifold.
- Disconnect vacuum line from EVAP canister purge regulator valve at throttle body.



- Disconnect harness connectors from Camshaft Position (CMP) sensor and Engine Coolant Temperature (ECT) sensor.
- Disconnect ignition coil harness connectors.
- Disconnect vacuum line from Intake Manifold Tuning (IMT) valve.

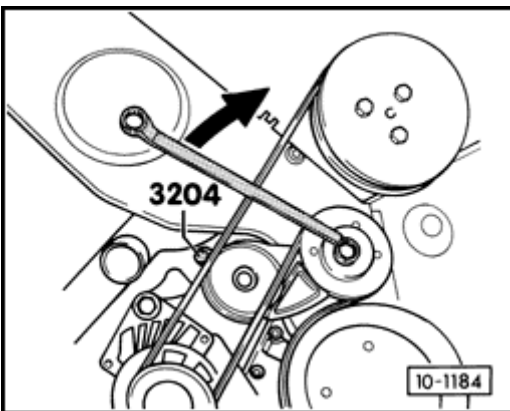
Color: blue



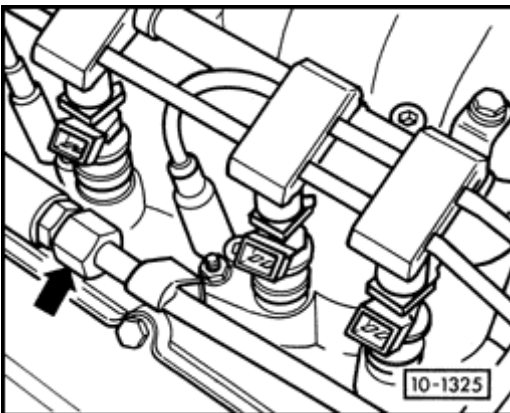
- Clamp off supply line to power steering vane pump using special tool 3094, Snap-On YA 2850, or equivalent.
- Disconnect hose from pump bracket.

Use rag to absorb any spills.

- Remove cover for ribbed belt.

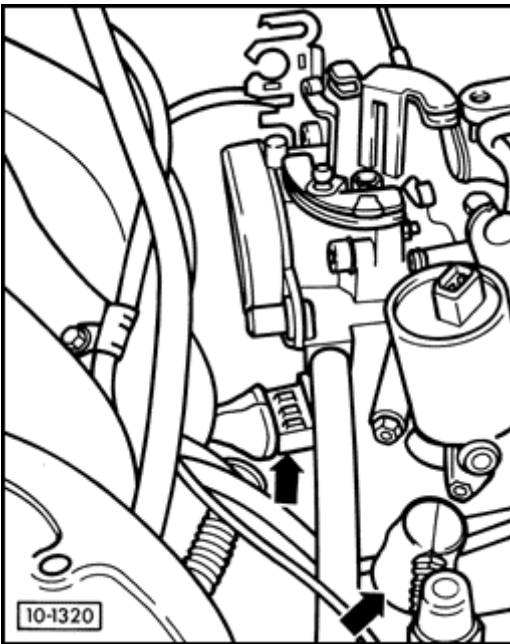


- Loosen ribbed belt as shown, and insert drift 3204 to secure belt tensioner.
- Remove ribbed belt.
- Remove coolant hose between engine and radiator on left side, and disconnect hose on right side.

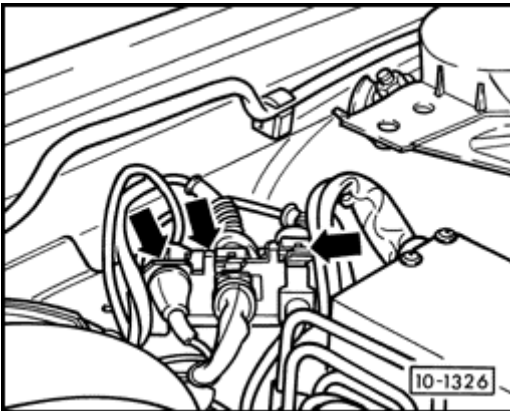


- Disconnect pressure line from power steering pump (arrow).

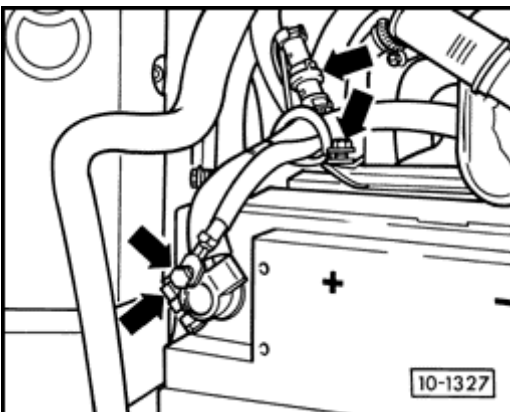
Use rag to absorb any oil spills.



- Disconnect harness connectors from Throttle Position (TP) sensor and Engine Coolant Temperature (ECT) thermal switch -F76- (arrows).

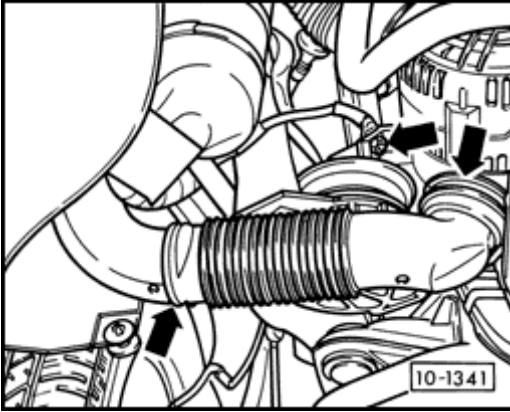


- Disconnect harness connectors for Heated Oxygen Sensor (HO2S), oxygen sensor heater and knock sensor (arrows).

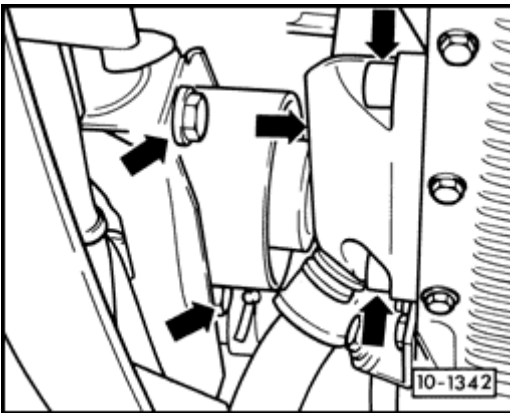


- Disconnect Battery positive (+) cable.
- Remove cable brackets on battery bracket and engine block.

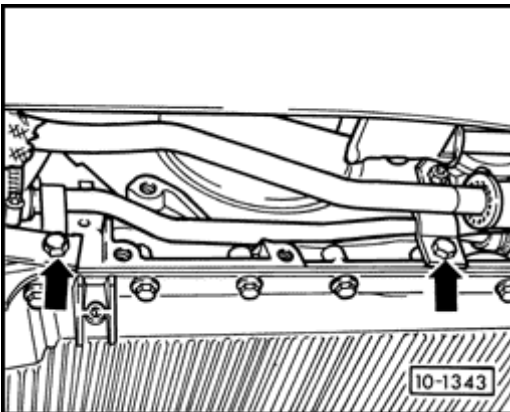
- Disconnect connectors.
- Move cable to one side.



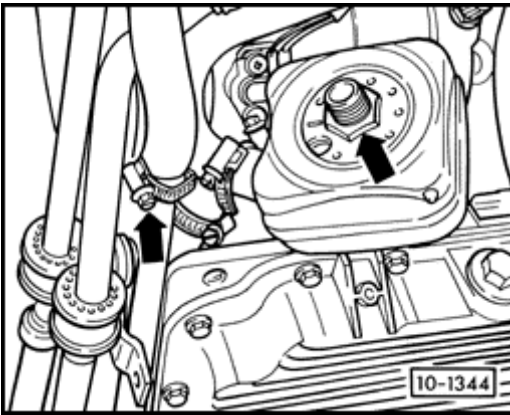
- Disconnect cooling air duct to generator (arrows).
- Disconnect engine to body ground strap (arrow, top left).



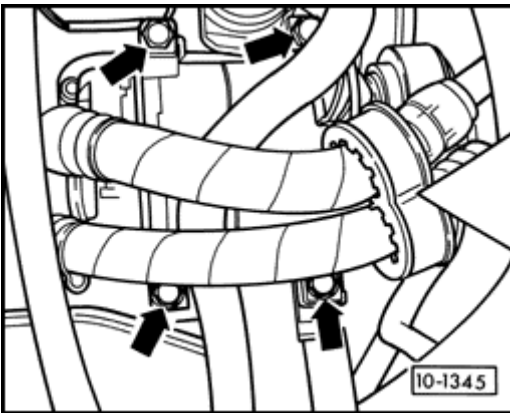
- Loosen bolts holding front engine mount at engine and crossmember (arrows).



- Disconnect A/C and coolant hose brackets at front of engine oil pan (arrows).
- Disconnect coolant hose between coolant line and radiator (below and to right).
- Remove oil filter.



- Disconnect and remove oil cooler behind oil filter.
- Disconnect coolant line.
- Disconnect harness connectors for A/C clutch (single) and for vehicle speed sensor (double).
- Open cable straps and lay wiring to one side.



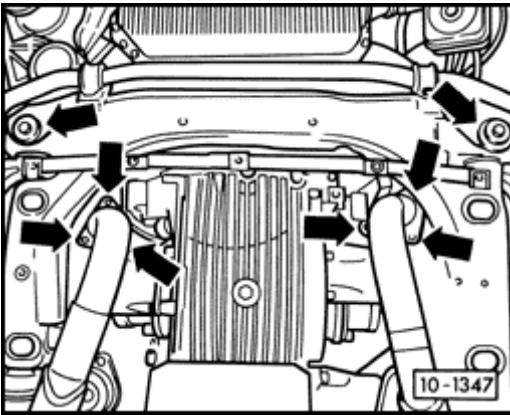
- Loosen and remove A/C compressor from engine (arrows).

Lines remain connected.

CAUTION!

- ◆ Disconnect brackets and support points only.
- ◆ DO NOT open the air conditioning refrigerant circuit.
- ◆ Refrigerant lines kink easily.
- ◆ The A/C refrigerant circuit must only be opened by specially trained technicians using the proper tools and equipment.

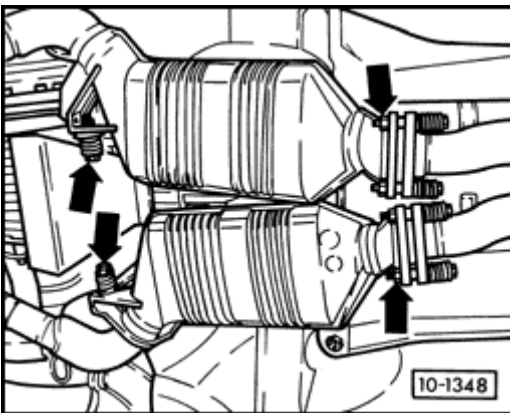
- Carefully secure A/C compressor off to one side with wire.



- Disconnect exhaust pipes from exhaust manifolds (three bolts on each pipe, arrows).
- Remove both front bolts from engine crossmember (arrows, top).

WARNING!

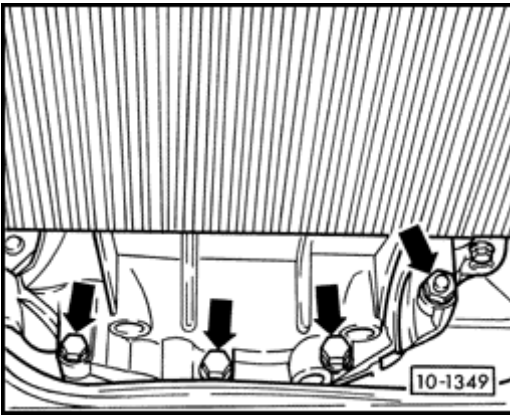
Be prepared. The crossmember will suddenly drop approximately 3/8 inch after removing the front bolts.



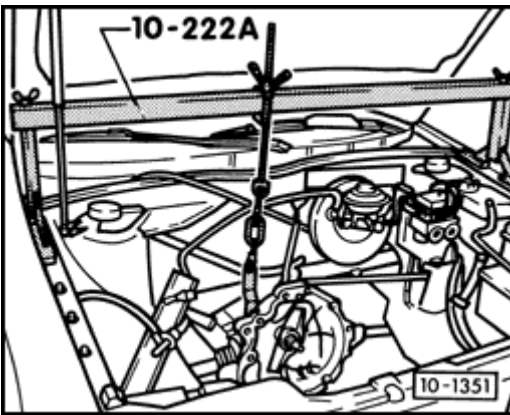
- Remove both exhaust pipes complete with Three Way Catalytic Converters (TWC).
- Remove starter.
- Unfasten steering shaft cover at right at transmission
- Unfasten starter bolts all the way back to the steering shaft

Vehicles with automatic transmission:

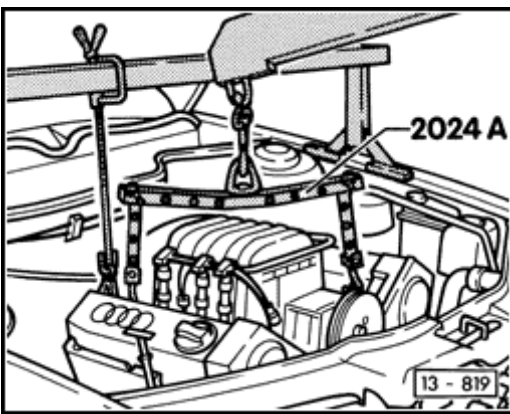
- Working through starter opening, remove 3 torque converter mounting bolts.



- Remove upper and lower engine-to-transmission mounting bolts.



- Support transmission using engine support bridge 10-222A, suspension fixture 10-222 A-2, and engine support adaptor 3147.
- Remove nut on right side engine mount.

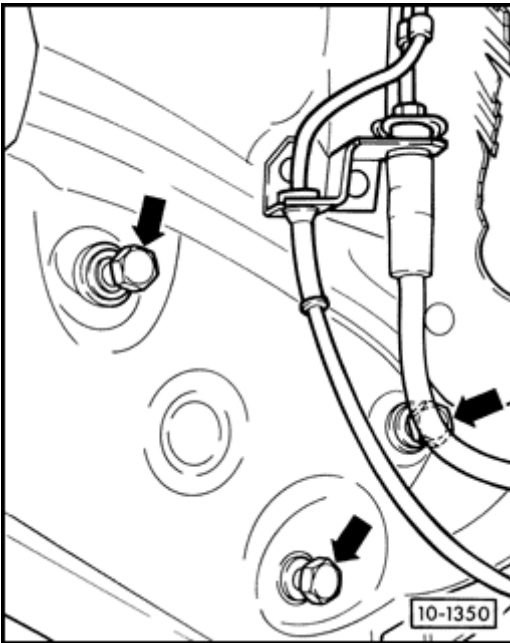


- Attach engine sling 2024A to right-rear and left-front of engine, and secure.

Note:

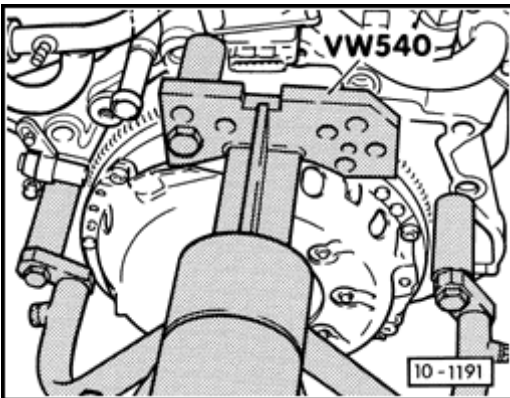
In order to balance the engine using its center of gravity, the rail holes of the engine sling must be arranged as illustrated.

- Attach workshop crane to engine sling.
- Lift engine slightly.



- Remove front engine support from long member.
- Carefully lift engine while turning engine support bridge 10-222A until clear of right engine mount.
- Carefully pull engine forward until it is completely clear.
- Lift out starter after engine has been separated from transmission.
- Lift engine up and out.

Mounting engine cylinder block to assembly stand



- Mount engine to stand using engine holder VW 540 and spacers VW 540/1A.

CAUTION!

DO NOT measure cylinder bore dimensions (Repair Group 13) while the cylinder block is mounted on the assembly stand. The cylinder block is stressed and deformed by its own weight under these conditions, and the measurements will not be accurate.