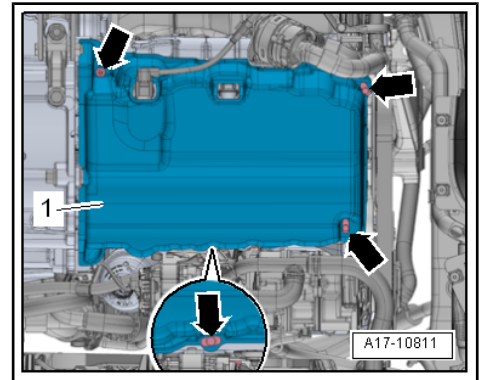
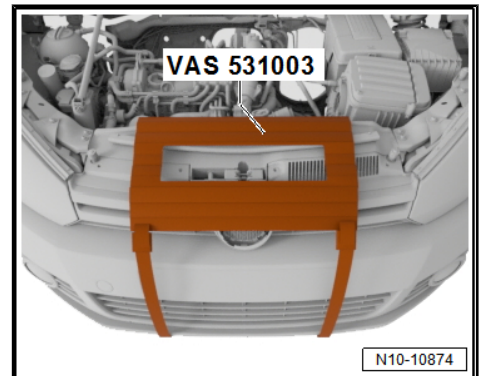


Continuation for all vehicles

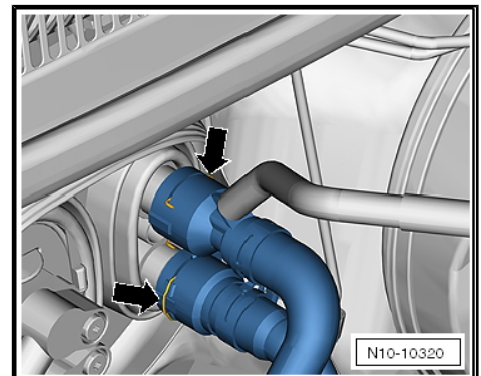
- Release fasteners -arrows- and detach noise insulation -1- for sump.
- To do this, pull pins out of spreader rivets.
- Remove radiator cowl ⇒ [page 238](#) .



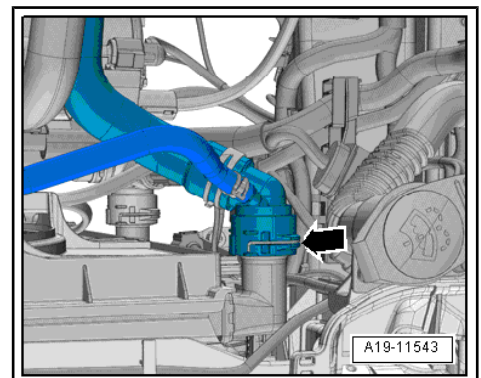
- Attach protective mat - VAS 531003- to vehicle as shown in illustration.
- Set drip tray for workshop hoist - VAS 6208- underneath.
- Drain coolant ⇒ [page 177](#) .
- Unbolt brackets for electric coolant from engine ⇒ [page 186](#) .
- Release and pull off connectors on coolant pumps.
- Push coolant pumps with coolant hoses connected to one side in order to free some space.



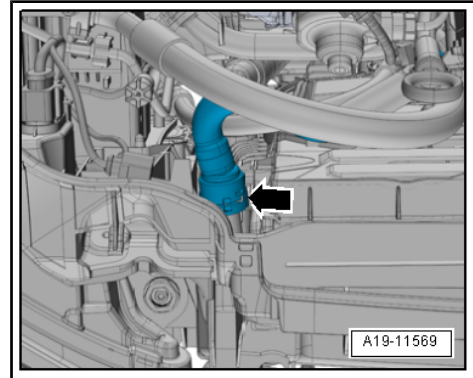
- Place a cloth underneath heat exchanger for heater to catch escaping coolant.
- Lift retaining clips -arrows- and disconnect coolant hoses from heat exchanger for heater.



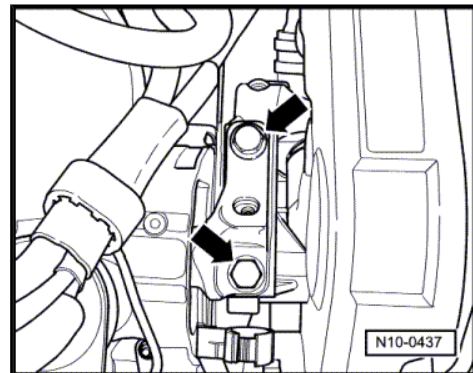
- Lift retaining clip -arrow- and disconnect coolant hose (top left) from radiator.



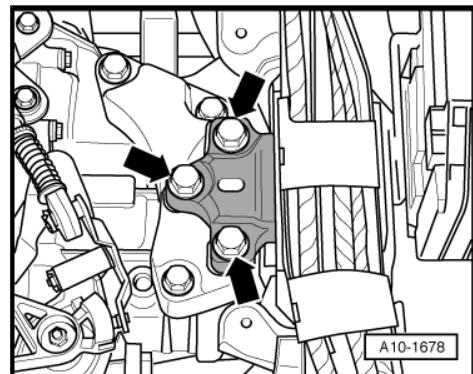
- Lift retaining clip -arrow- and disconnect coolant hose (top right) from water radiator for charge air cooling circuit.



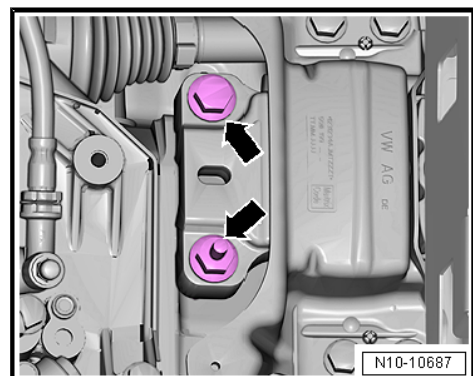
- Unscrew bolts -arrows- on engine mounting approx. 2 turns.
- Unscrew bolts -arrows- on gearbox mounting approx. 2 turns.



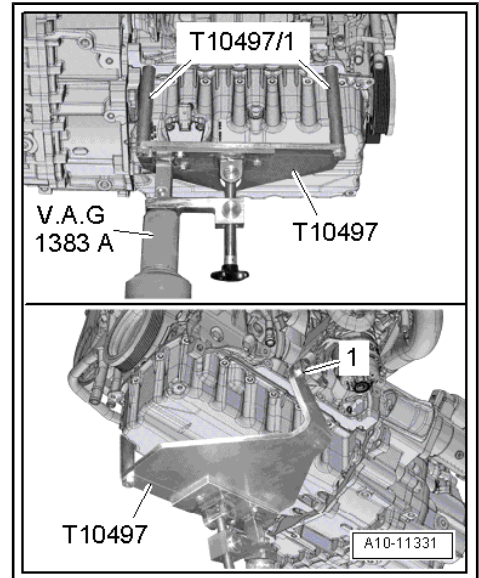
Vehicles with three gearbox securing bolts:



Vehicles with two gearbox securing bolts:



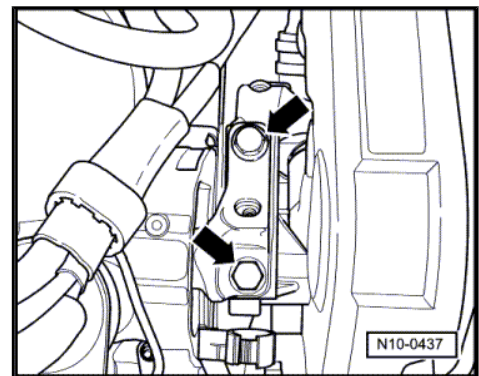
- Attach engine support -T10497- with pin -T10497/1- to cylinder block with bolt -1- (tighten to approx. 20 Nm).
- Insert engine and gearbox jack - V.A.G 1383 A- in engine support -T10497- .
- Raise engine/gearbox assembly slightly.



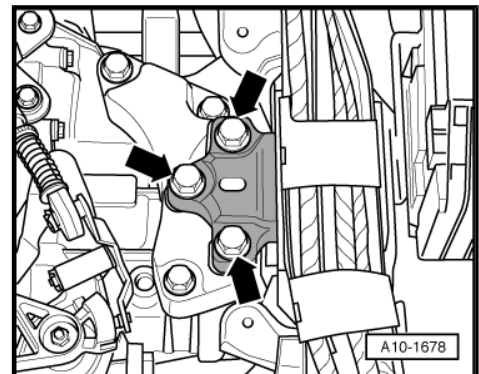
i Note

Use a stepladder to unscrew the bolts for the assembly mounting.

- Remove bolts -arrows- for engine mounting.
- Remove bolts -arrows- securing gearbox mounting.



Vehicles with three gearbox securing bolts:

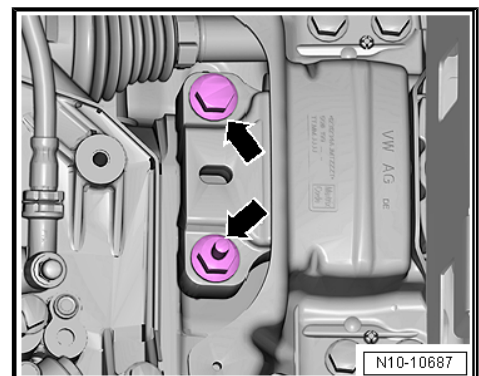


Vehicles with two gearbox securing bolts:

! Caution

Avoid damage to vacuum lines, electrical wiring or the engine compartment.

- ◆ *Check that all vacuum lines and electrical wiring between engine, gearbox and body have been detached.*
- ◆ *When lowering, carefully guide engine/gearbox assembly out of engine compartment.*



- Lower engine/gearbox assembly.

1.2 Separating engine and gearbox

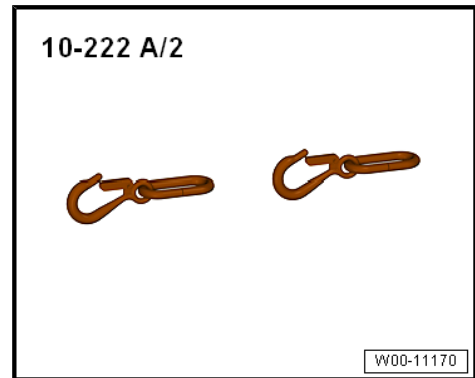
⇒ [“1.2.1 Separating engine and gearbox, vehicles with manual gearbox”, page 22](#)

⇒ [“1.2.2 Separating engine and gearbox, vehicles with dual clutch gearbox”, page 24](#)

1.2.1 Separating engine and gearbox, vehicles with manual gearbox

Special tools and workshop equipment required

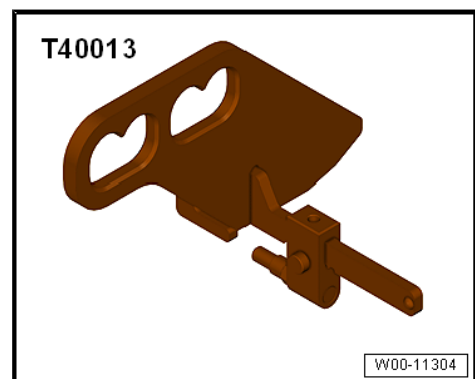
◆ Hooks - 10 - 222 A /2-



◆ Workshop hoist - VAS 6100-



◆ Lifting tackle - T40013-

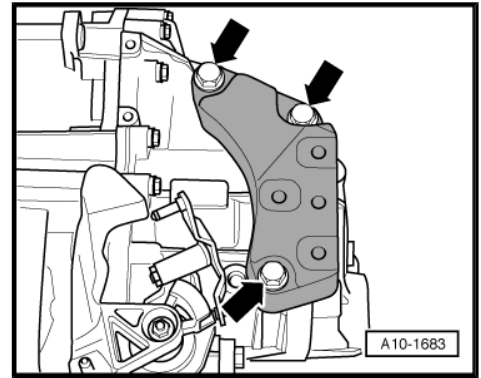


Procedure

- Engine/gearbox assembly removed and attached to engine support -T10497- .
- Remove starter ⇒ Electrical system; Rep. gr. 27 ; Starter; Removing and installing starter .

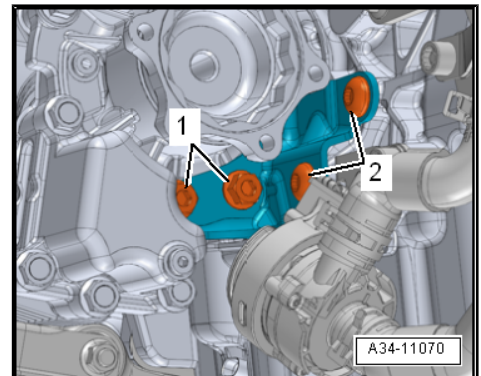
- Unscrew bolts -arrows- and detach gearbox support.

Vehicles with all-wheel drive

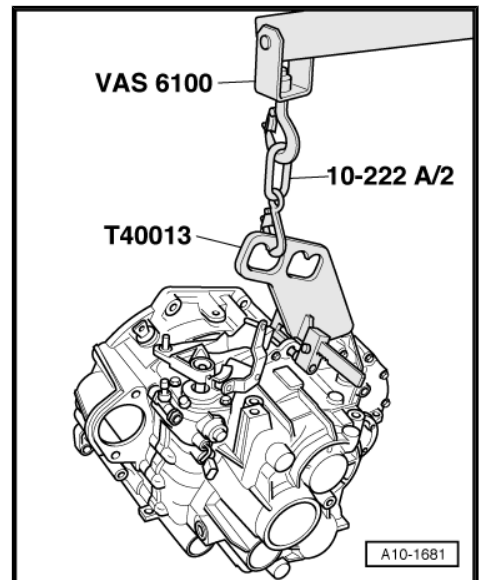


- Unscrew bolts -1 and 2-, and remove bracket for bevel box.

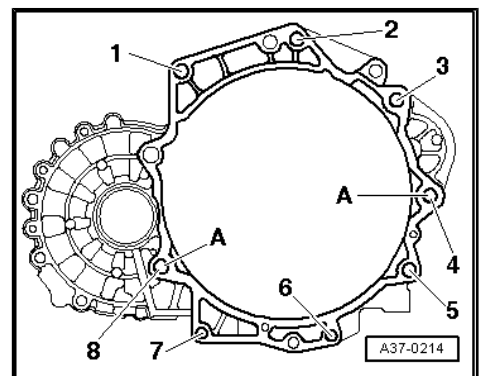
Continuation for all vehicles



- Attach lifting tackle - T40013- to gearbox and close lock.
- Attach workshop crane - VAS 6100- with hooks - 10 - 222 A / 2- to lifting tackle.



- Unscrew bolts -1, 2, 5, 6, 7, 8- from gearbox to engine connection.
- Detach gearbox from engine (pay attention to intermediate plate).



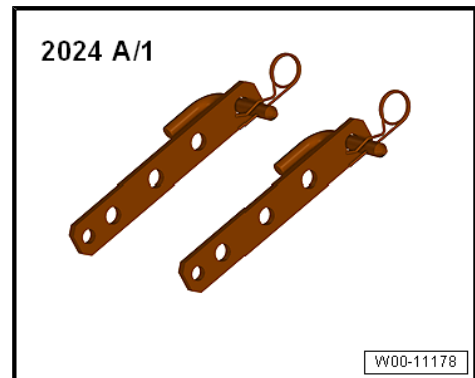
1.2.2 Separating engine and gearbox, vehicles with dual clutch gearbox

Special tools and workshop equipment required

- ◆ Adapter - 10 - 222 A /20-



- ◆ Hook -2024 A /1- of lifting tackle - 2024 A-



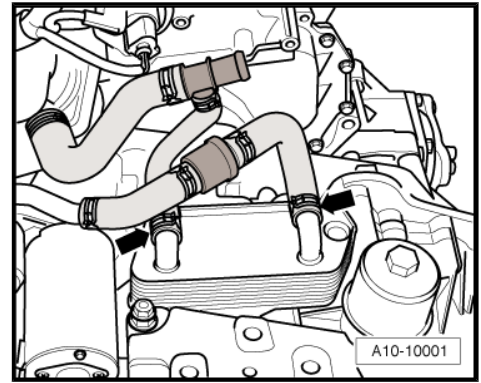
- ◆ Workshop hoist - VAS 6100-



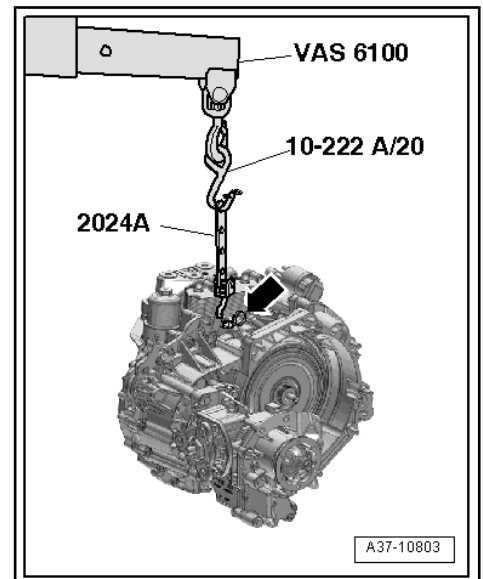
Procedure

- Engine/gearbox assembly removed and attached to engine support - T10497- .

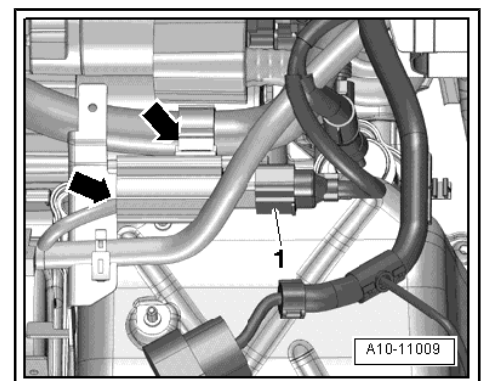
- Remove coolant hoses from gear oil cooler, loosen hose clips -arrows- for this.



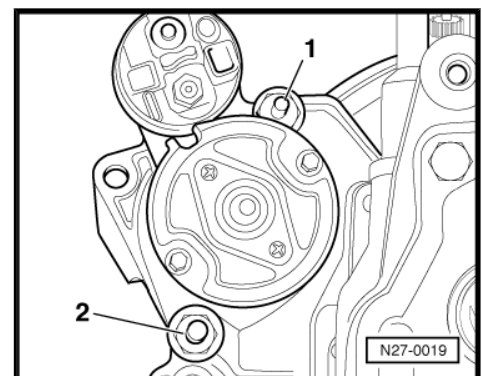
- Attach hook of lifting tackle - 2024 A- to gearbox lifting eye.
- Secure hook with pin -arrow-.
- Attach workshop hoist - VAS 6100- to lifting tackle with adapter - 10 - 222 A /20- .



- Free wiring harnesses -arrows- and electrical connector -1- at bracket.



- Unscrew bolts -1- and -2-, and remove starter from gearbox.



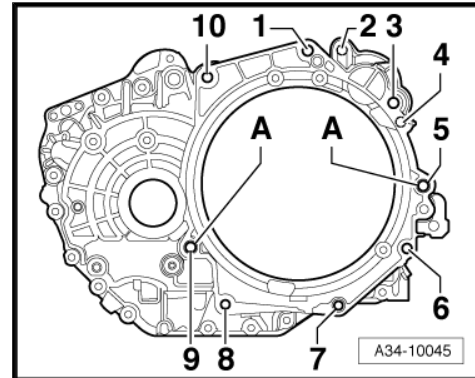
- Unscrew remaining bolts -1, 3, 5, 6, 7, 8, 9, 10- from gearbox to engine connection.



Note

Bolt -3- is only accessible after removing starter.

- Pull gearbox off engine.

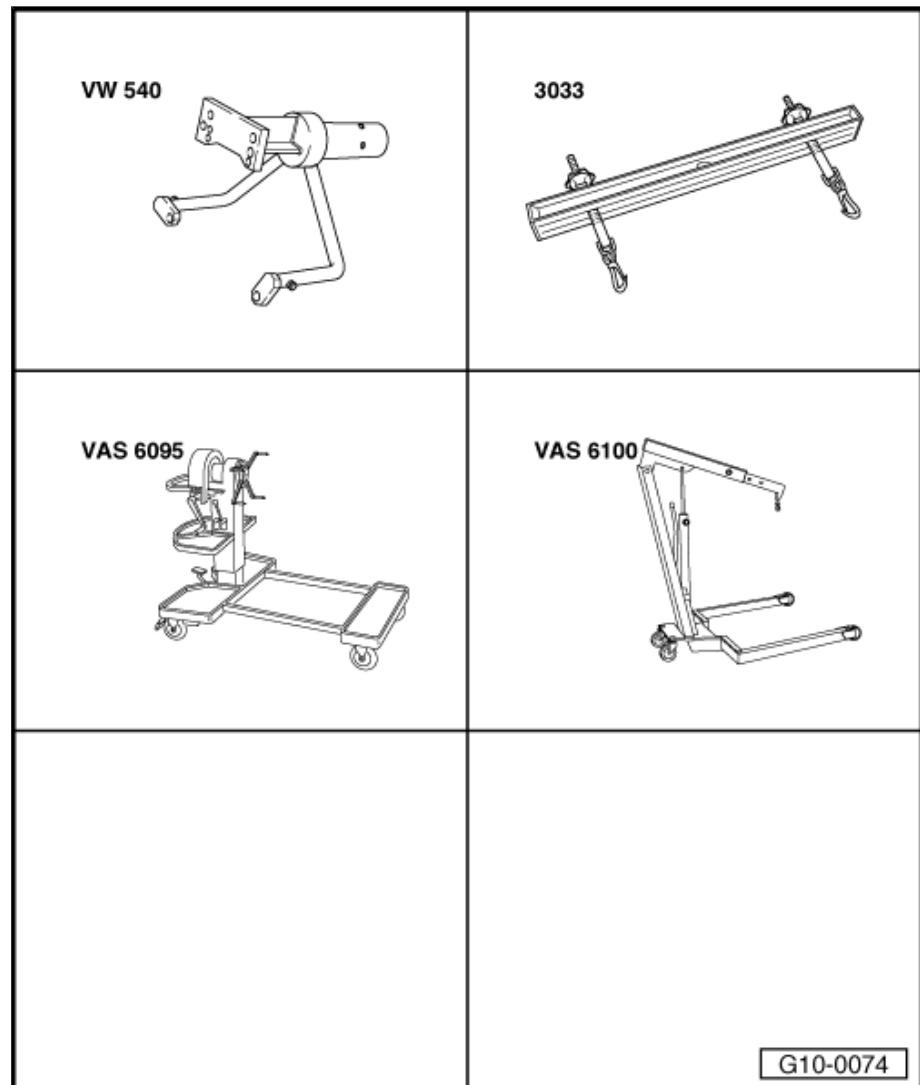


1.3 Securing engine on engine and gearbox support

Before carrying out repair work, secure engine to the engine and gearbox support - VAS 6095- with universal mounting - VAS 6095/1- or engine and gearbox support - VW 540- .

Special tools and workshop equipment required

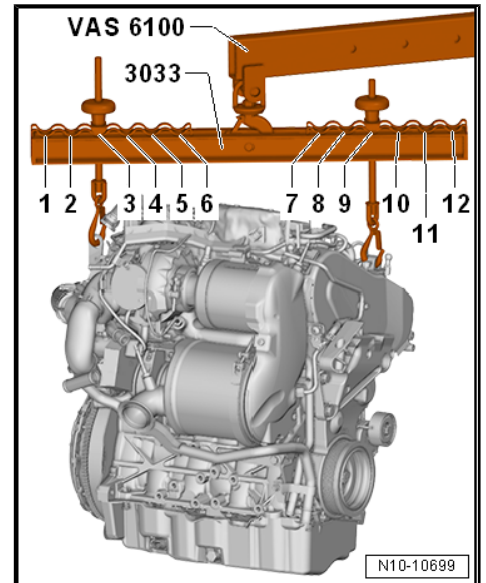
- ◆ Engine and gearbox support - VW 540-
- ◆ Lifting tackle - 3033-
- ◆ Engine and gearbox support - VAS 6095-
- ◆ Workshop hoist - VAS 6100-



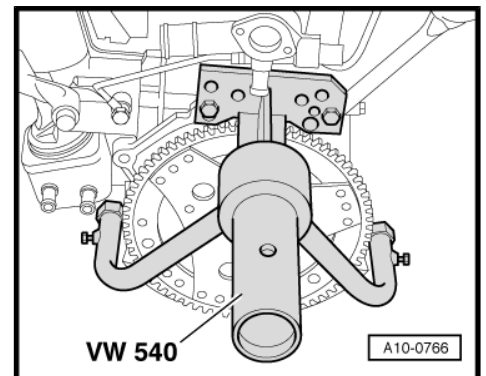
Procedure

- Separate gearbox from engine ⇒ [page 22](#) .

- Connect lifting tackle - 3033- as shown.
- Position 3 - Flywheel end
Position 9 - Vibration damper end
- Lift engine out of engine support - T10497- using workshop hoist - VAS 6100- .



- Secure engine on engine and gearbox support - VAS 6095- with universal mounting - VAS 6095/1- or engine and gearbox support - VW 540- .



1.4 Installing engine

Specified torques



Caution

When installing a new short engine, it is compulsory to fix and tighten the clamping jaws of the injectors with the specified torque after installing the high-pressure lines ⇒ [page 285](#) . Clamping jaws are only secured »hand-tight« for setting the injectors while installing high-pressure lines. Non-observance of these notes may lead to damage to engine.

 **Note**

- ◆ *After new components have been installed (engine/short engine, cylinder head, camshaft housing or turbocharger), the oil pressure control must be set to max. pressure for approx. 1000 km, given the function is available in the engine control unit. This will compensate for the increased friction during run-in of new components, and a better transport of wear-related particles is guaranteed. To do this, connect vehicle diagnostic tester, switch on ignition, and select the following menu options:*

- ◆ `01 - Engine electronics`
- ◆ `Guided Functions`
- ◆ `Adaption`
- ◆ `Oil pressure control/activate run-in function`

Component		Nm
Nuts and bolts	M6	10
	M7	15
	M8	20
	M10	40
	M12	65

- ◆ Assembly mountings
⇒ ["2.1 Assembly overview - assembly mountings", page 32](#) .
- ◆ Securing gearbox to engine ⇒ Rep. gr. 34 ; Removing and installing gearbox; Installing gearbox

Procedure

 **Note**

- ◆ *Renew bolts that are tightened with turning further angle after each removal.*
 - ◆ *Renew self-locking nuts and bolts as well as gaskets, seals and O-rings after each removal.*
 - ◆ *Hose unions and air intake pipes and hoses must be free of oil and grease before installation.*
 - ◆ *Secure all hose connections with hose clips meeting production standard ⇒ [Electronic Parts Catalogue](#) .*
 - ◆ *Attach cable ties in all the same places when installing.*
- Install intermediate plate ⇒ [page 61](#) .