Installing

Installation is carried out in reverse sequence; note the following:

Note

- *Clean ATF pipes and ATF cooler before installing a replacement gearbox → Chapter*
- *Renew self-locking nuts and bolts when performing assembly work.*
- *Renew oil seals and gaskets, and bolts which are tightened by turning through a specified angle.*
- *It is important to clean the threads in the flange shafts on the gearbox and rear final drive to remove any remaining locking fluid after removing the propshaft. Otherwise there is a danger that the new bolts will seize when they are screwed in and then shear off the next time they are removed.*
- *The threads can be cleaned with a thread tap.*
- *Secure all hose connections with the correct hose clips (as original equipment); refer to → Parts catalogue.*
- *All cable ties which are released or cut open during removal must be fitted in the same position when installing.*

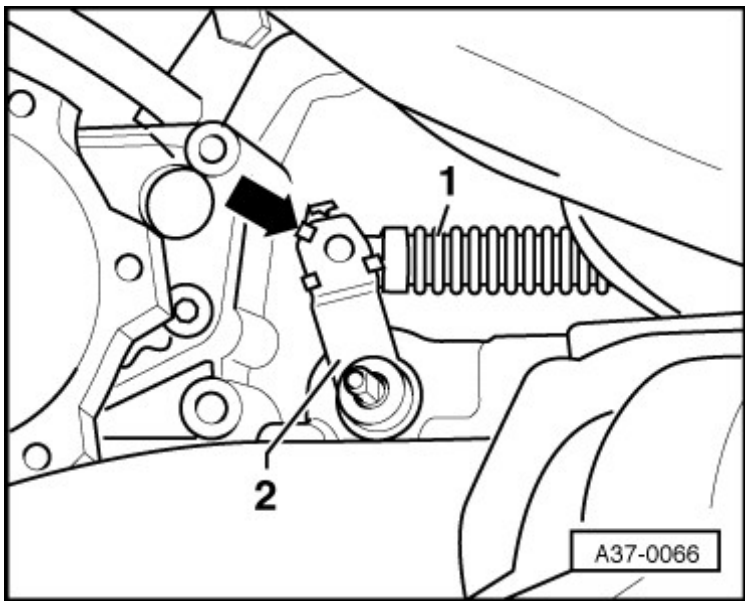
– Before installing gearbox, tie electrical wiring off to one side so that it cannot be trapped between the engine and the gearbox.

– Check that dowel sleeves for centralising engine/gearbox are in the cylinder block, install if necessary.

Note

If the dowel sleeves get stuck in the gearbox housing they must be removed and new dowel sleeves must be fitted on the engine.

– Press selector shaft lever -2- on gearbox towards the rear as far as it will go -arrow- until parking lock engages.



Note

-Item 1- can be disregarded.

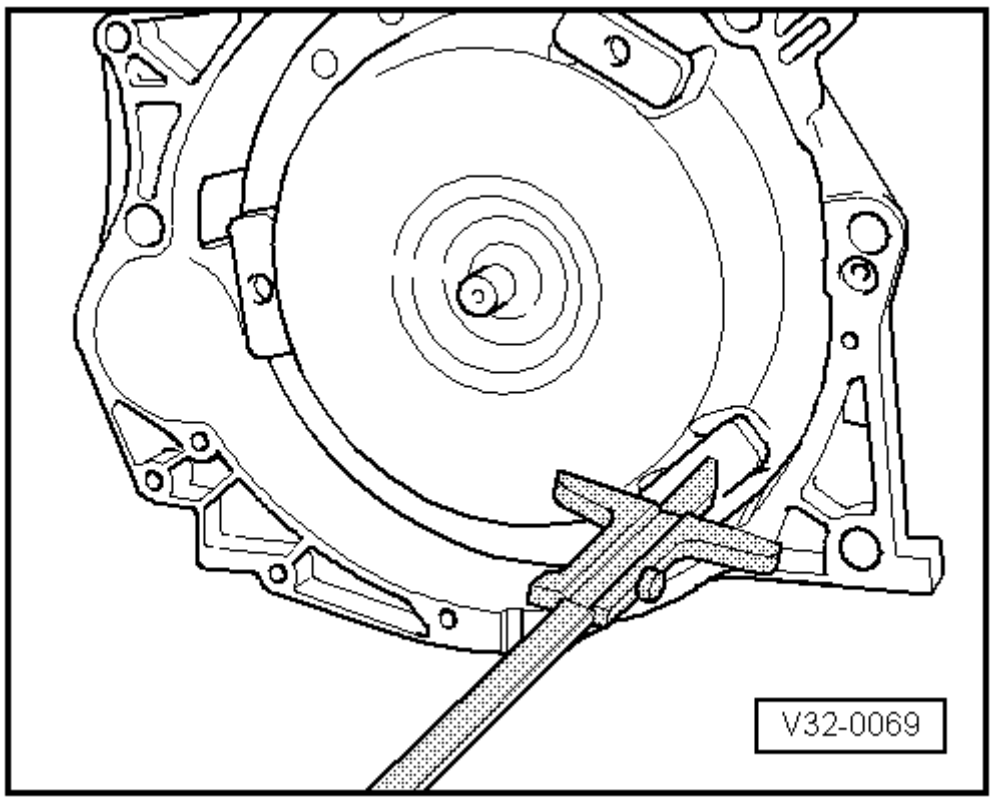
– Before installing the gearbox ensure that the torque converter has been correctly fitted in the gearbox → Chapter.

Checking position of

torque converter:

If the torque converter is correctly inserted, the distance between the surface of the securing eyes and the surface of the torque converter bellhousing is at least 22 mm.

If the torque converter has not been fully inserted, the distance will be only approx. 10 mm.

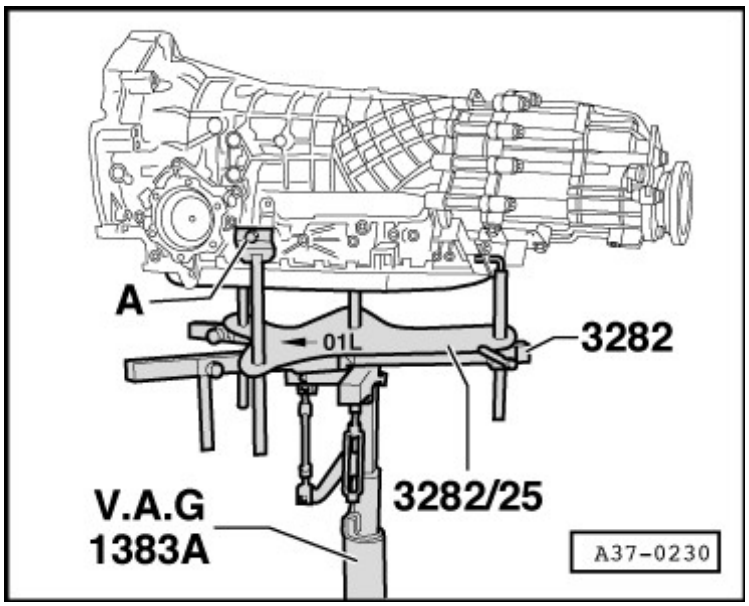


Caution

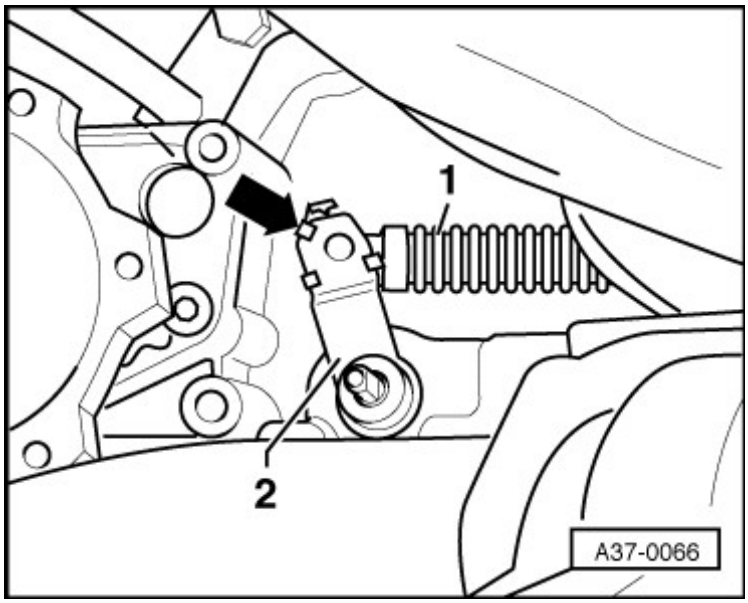
If the torque converter is not fitted correctly, the torque converter drive lugs or the ATF pump will be irreparably damaged when the gearbox is joined to the engine.

– Raise gearbox carefully and move to installation position using gearbox support -3282-.

– Align gearbox with engine.



– Shift selector lever to position “P” and carefully press ball head of selector lever cable -1- onto selector shaft lever -2- (using e.g. pliers).



Note

Make sure you do not bend the selector shaft lever when pressing on the cable, as this would make it impossible to obtain an accurate adjustment of the selector mechanism.

Caution

Before and while you are tightening the bolts on the engine/gearbox flange keep checking that the torque converter can still be rotated behind the drive plate. If the converter cannot be turned, it must be assumed that it has not been installed correctly and the drive lugs on the converter or the ATF pump will be damaged during final tightening of bolted connections.

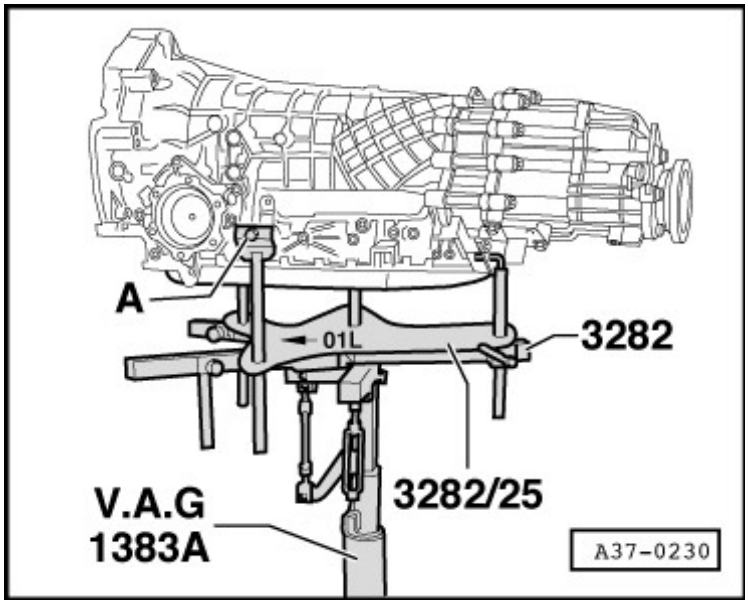
– Renew the M14 bolts on the subframe as well as their locking washers.

– Install subframe, observing the correct tightening sequence →Running gear, front-wheel drive and four-wheel drive; Rep. Gr.40.

– Install gearbox supports (left and right) with gearbox mountings → Chapter.

– Remove bolt -A- after gearbox has been secured to engine.

– Apply anti-corrosion agent to point of contact of bolt -A-.

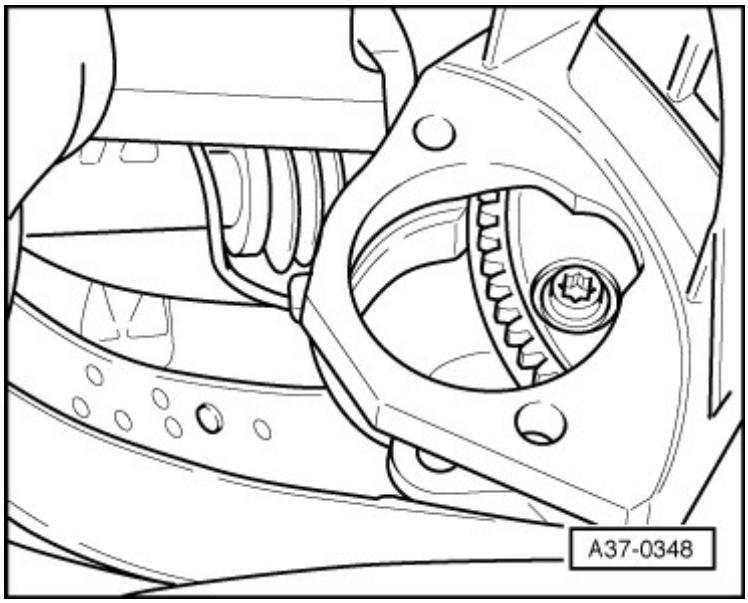


– Tighten the 3 Torx socket head bolts for the torque converter through opening for starter (rotate crankshaft $^{1}/_{3}$ turn for each bolt).

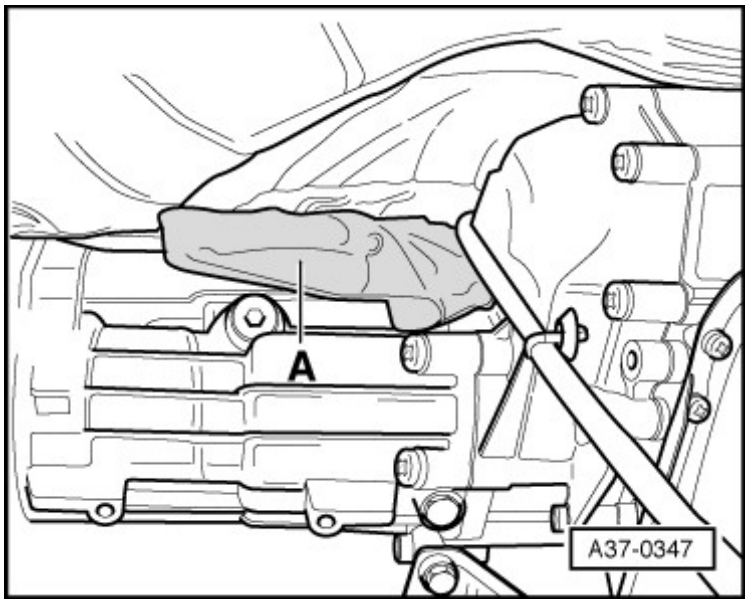
–

Install starter →Electrical system; Rep. Gr.27.

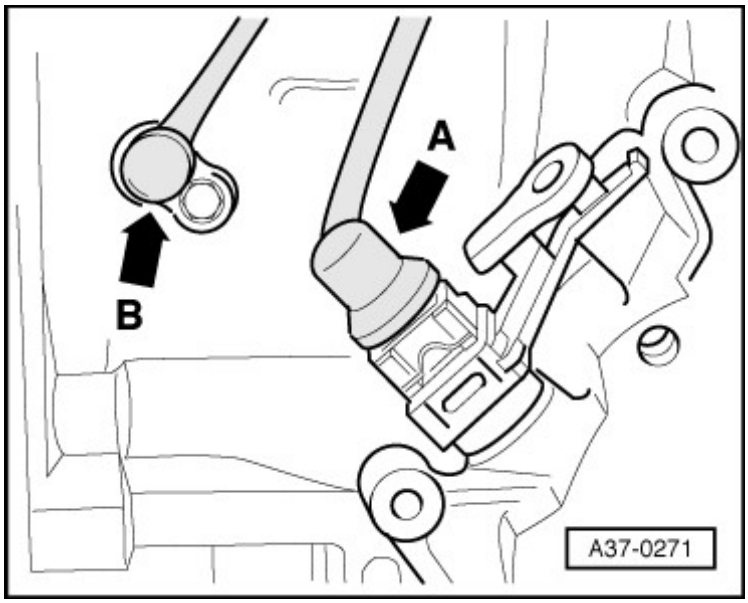
- Fit ATF pipes to engine/gearbox assembly → Chapter.
- Fit bracket for ATF pipes.
- Secure propshaft to gearbox flange → Chapter.



- Attach electrical connector to gearbox output speed sender -G195-.
- Make sure that heat insulation -A- above gearbox output speed sender -G195- is properly secured.

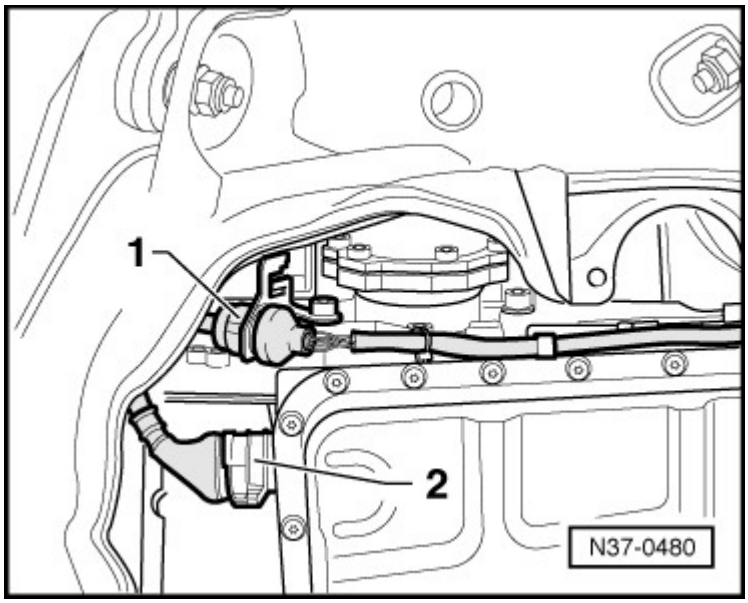


- Secure engine speed sender -G28- -arrow B- to front left of gearbox.
- Attach electrical connector to speedometer sender -G22-.
- Bolt drive shafts (left and right) to flange shafts →Running gear, front-wheel drive and four-wheel drive; Rep. Gr.40.
- Fit bolts to support bracket of selector lever cable and install selector lever cable; adjust if necessary.



- Attach electrical connector to multi-function switch -F125- -item 1-.

- Attach connector for gearbox wiring harness and secure with locking lever -2-.
- Connect earth wire at battery.
- Perform steps required after connecting battery →Electrical system; Rep. Gr.27.
- Install exhaust system and ensure stress-free alignment →Engine, mechanics; Rep. Gr.26.
- Adjust selector lever cable → Chapter.
- Check gear oil in final drive of automatic gearbox → Chapter.
- Check ATF level → Chapter.

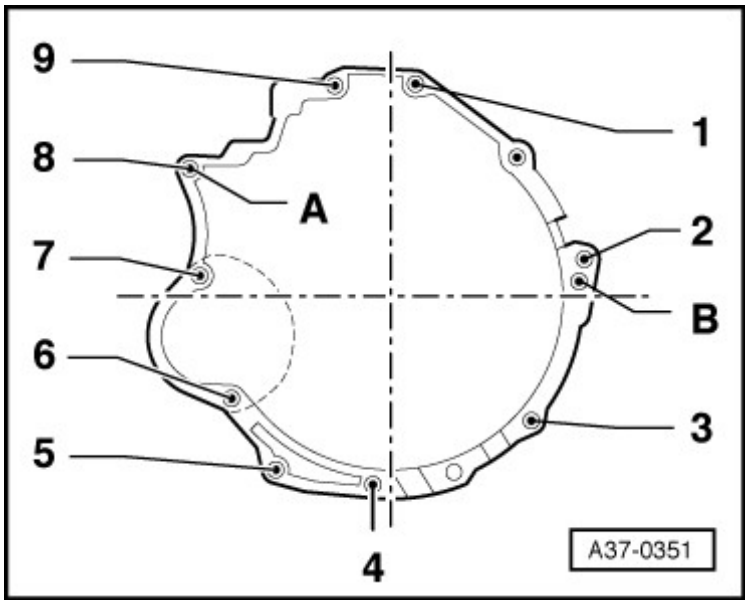


Tightening torques

Note

- *Tightening torques apply only to lightly greased, oiled, phosphated or black-finished nuts and bolts.*
- *Additional lubricant such as engine or gear oil may be used, but do not use graphite lubricant.*
- *Do not use parts which have been degreased.*

Engine/gearbox securing bolts:



Item	Bolt	Nm
1, 8, 9	M12x75	65
2	M12x110	65 → Note
3	M10x60	45
4, 5	M10x45	45
6	M10x80	65 → Note
7	M12x110	65 → Note

A	Dowel sleeve for centralising
B	Dowel sleeve for centralising

1) With bracket for ATF pipes

2) Securing bolt for starter.

Component		Nm
Bolts/nuts	M6	10
	M8	20
	M10	45
	M12	65
Except for the following:		
Drive plate to torque converter	M10 x1	85 → Note
Multifunction switch -F125- to gearbox		8
Support bracket to gearbox		23
Heat shield for	M6	9
selector lever cable to gearbox	M8	23
Selector lever cable to support bracket		12
Multi-function switch to gearbox		8
Gearbox support to:	Gearbox	40
	Gearbox mounting	50
Gearbox mounting to subframe		23
Bracket for noise insulation to subframe		10
Heat shield for drive shaft		25
Heat shield for propshaft		25

3) Renew bolts.