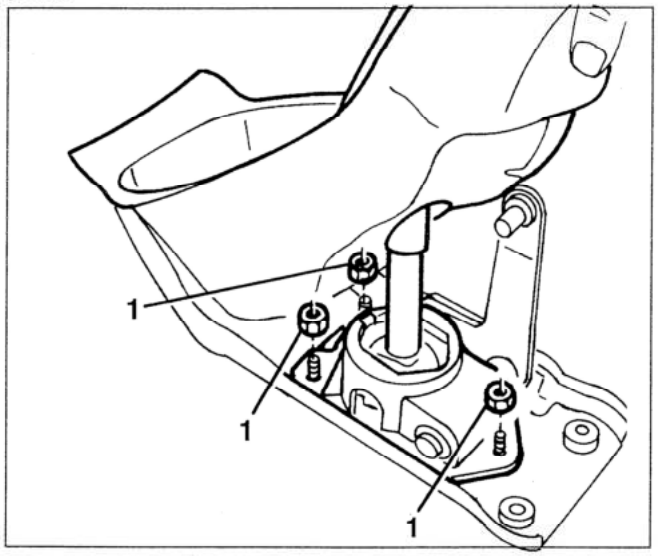
1. Raising the sound deadener mat remove the three fastening nuts and remove the lever complete with ball joint.

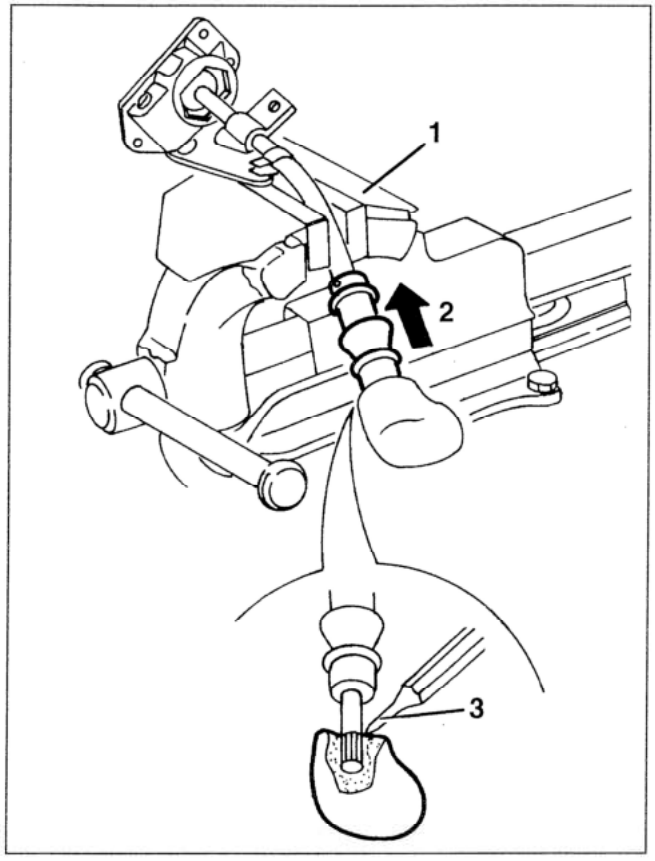


GEARSHIFT LEVER KNOB

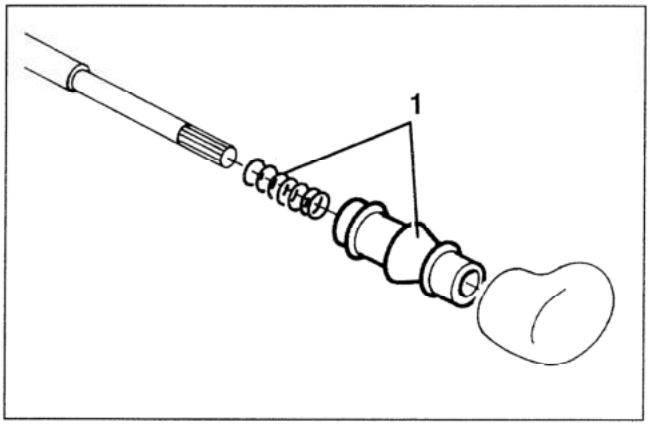
Replacement

– Remove the gearshift lever (see previous paragraph).

1. Clamp the lever in a vice (with plastic jaws).
2. Compress the sliding sleeve moving it away from the knob.
3. Withdraw the knob using a flat-headed punch.



1. Withdraw the sliding sleeve and the spring.



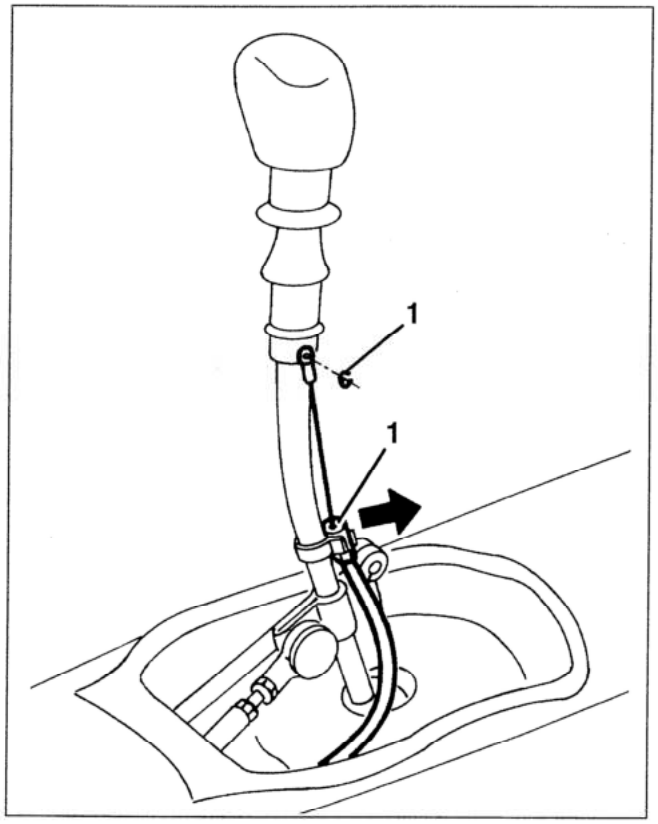
When refitting use a press, forcing the knob to prevent it from turning.
To prevent damage to the knob, interpose a suitable plastic spacer between the press and the knob.
NOTE: If the knob can be re-used re-assemble it using LOCTITE.
The presence of drops of LOCTITE on the stem will not adversely affect operation of the mobile guide.

Alfawiki.nl

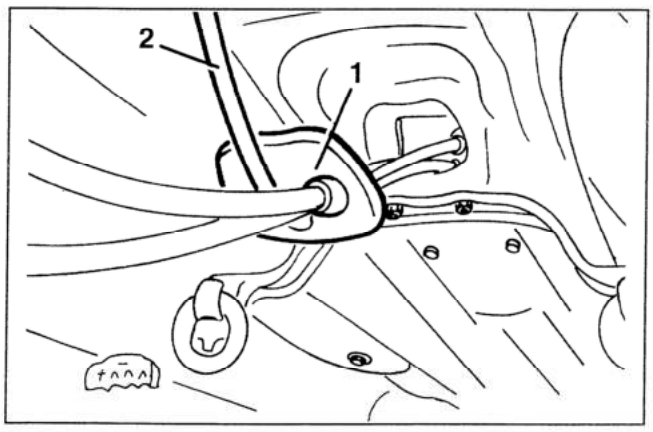
REVERSING GEAR RELEASE CABLE

Removing / refitting

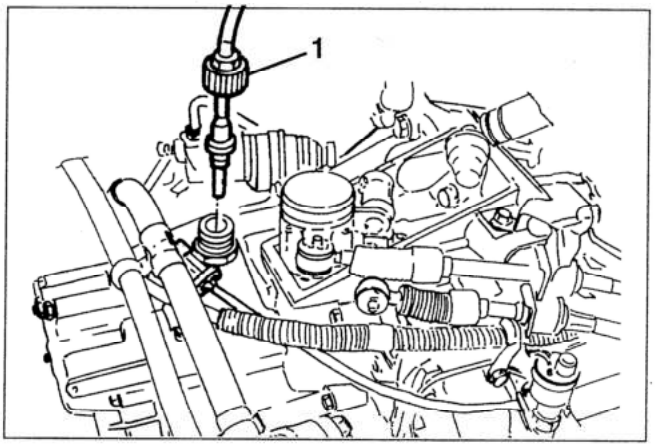
– Set the car on a lift.
– Remove the tunnel console (see GROUP 70).
1. Remove the retainer ring and disconnect the reverse gear cable releasing it from the fastening clamps.



– Working under the car, remove the front and centre section of the exhaust (see GROUP 10).
– Remove the catalyst heat shield.
1. Withdraw the cable lead grommet from the body pulling the cables downwards.
2. Retrieve the cable pulling from below. If necessary cut the cable lead rubber.



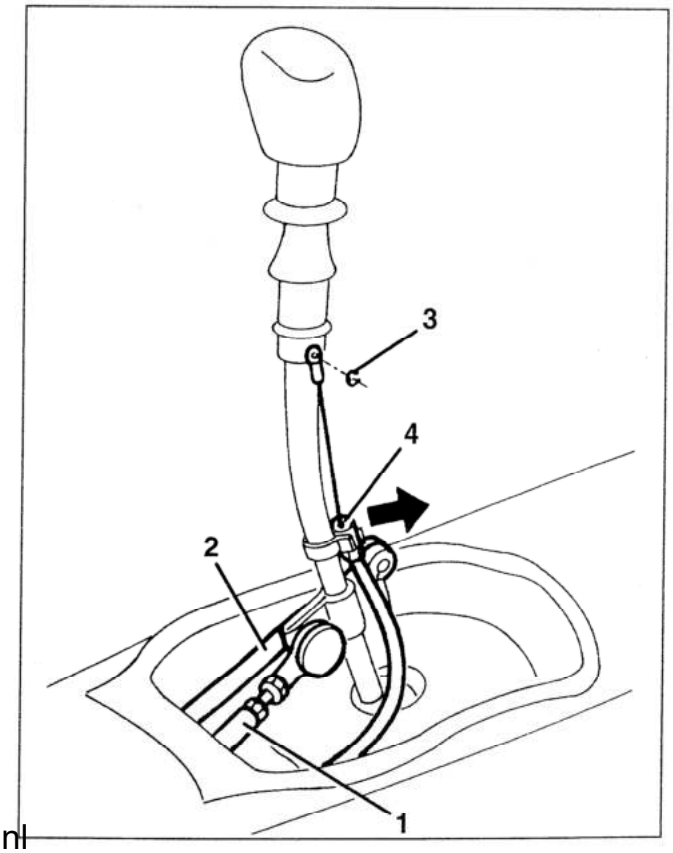
– Working in the engine compartment, remove the air cleaner complete with inlet sleeve (see GROUP 10).
1. Disconnect reverse gear release cable from the gearbox slackening the pin.
– Retrieve the cable.



GEARSHIFT LEVER

Removing / Refitting

– Remove the tunnel console (see GROUP 70).
1. Disconnect the the gear selection lever from the cable.
2. Remove the retainer ring and disconnect the gear engagement cable.
3. Remove the retainer ring and disconnect the reverse gear cable from the lever.
4. Separate the reverse gear cable from the lever releasing it from the fastening clamps.



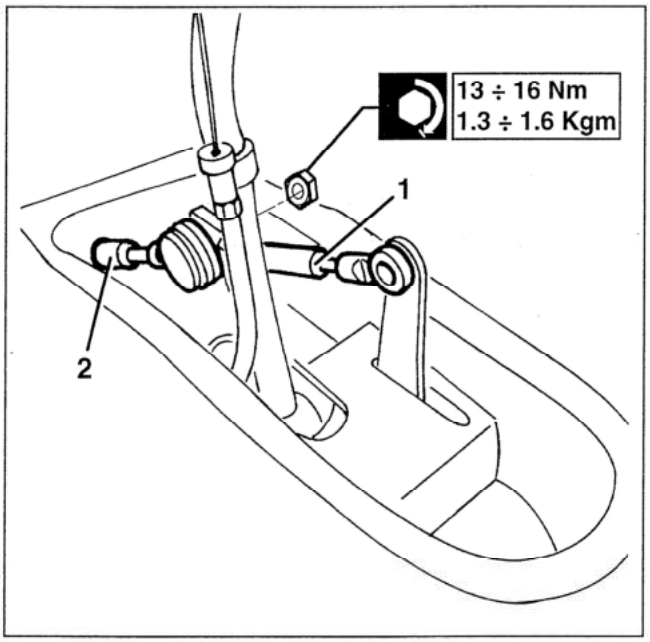
Alfawiki.nl

CABLE CONTROL

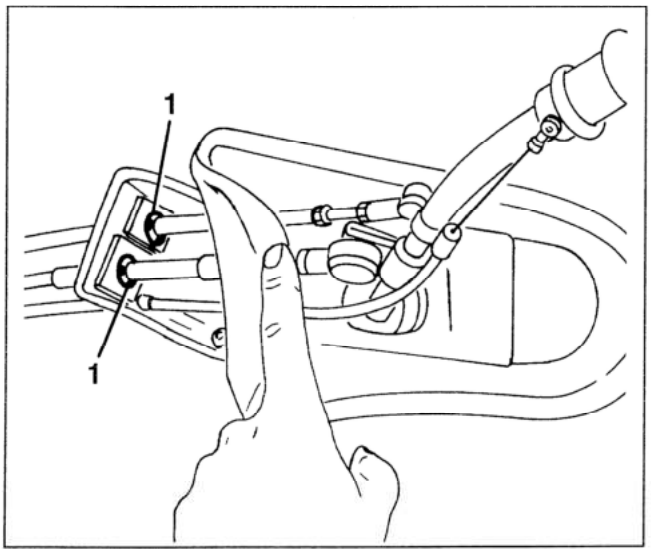
GEAR ENGAGEMENT AND SELECTION CABLES

Removing / Refitting

– Set the car on a lift.
– Remove the tunnel console (see GROUP 70).
1. Disconnect the gear engagement cable from its fastening pin.
2. Disconnect the gear selection cable from the lever.

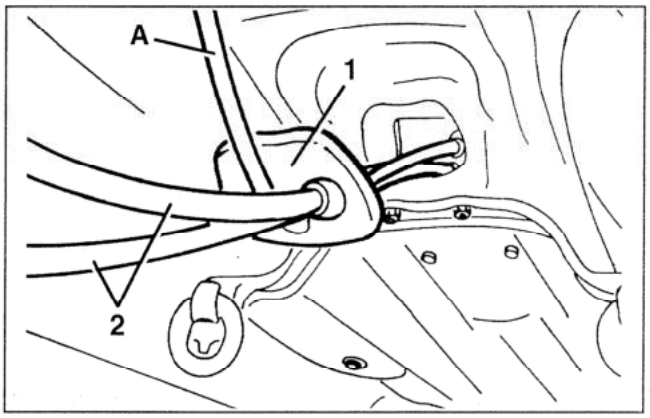


1. Raise the mat and remove the cable fastening clamps.

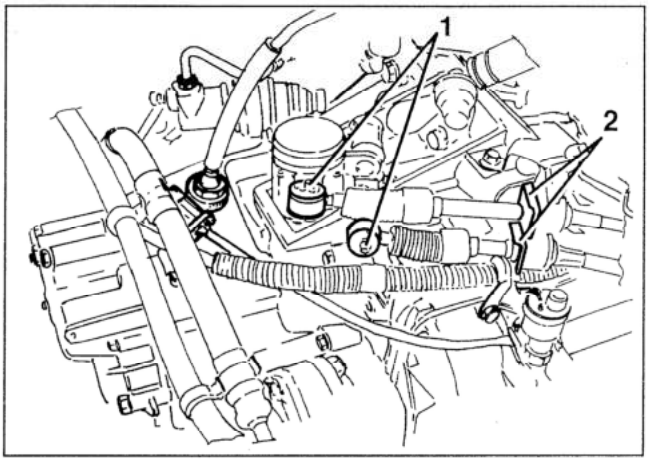


– Working under the car, remove the front and centre section of the exhaust piping (see GROUP 10).
– Remove the heat shield of the catalyst.

1. Withdraw the cable lead grommet from the body pulling the cables downwards.
NOTE: Take care not to damage the reverse gear release cable (A) which is fastened to the gearshift lever.
2. Retrieve the cables pulling them from below. If necessary cut the cable lead grommet.

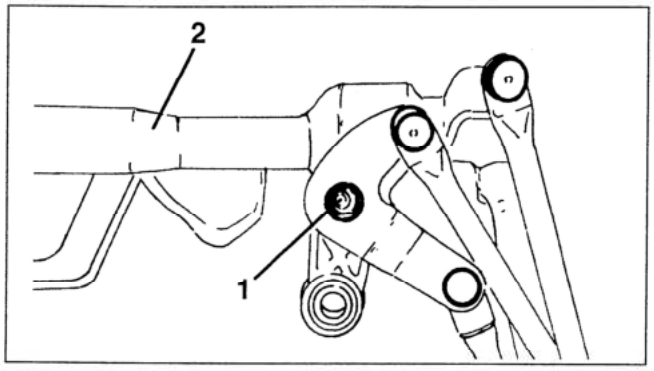


– Working in the engine compartment, remove the air cleaner complete with inlet sleeve (see GROUP 10).
1. Disconnect the cables from the gear engagement device.
2. Remove the clamps fastening the cable to the bracket on the gearbox.
– Retrieve the cables.



Alfawiki.nl

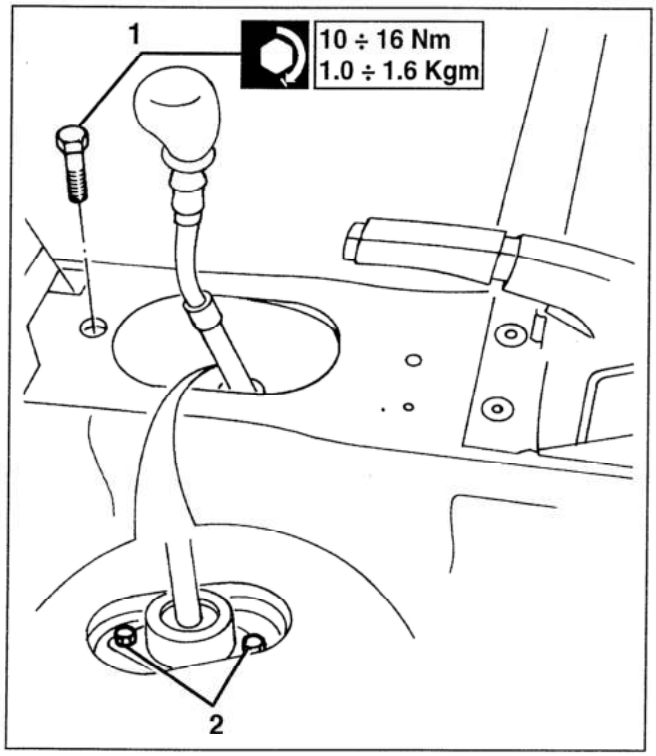
1. Disconnect the gearshift control rod from the support on the power steering box.
2. Retrieve the rod.



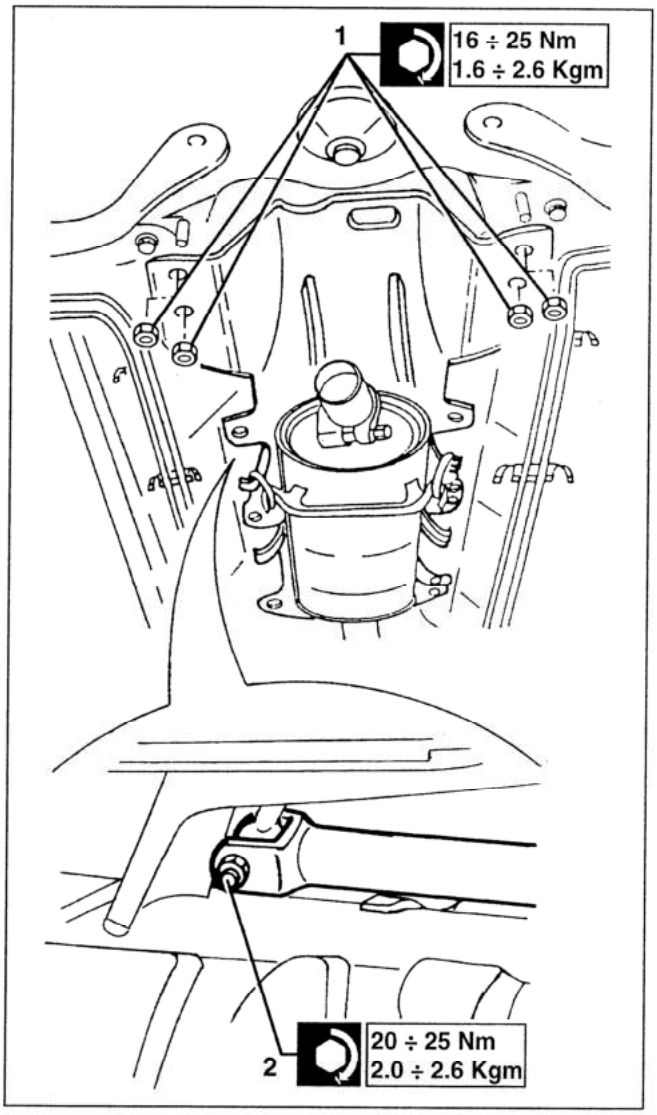
GEARSHIFT LEVER

Removing / Refitting

– Set the car on a lift.
– Working from inside the car, remove the tunnel console (see GROUP 70).
1. Slacken the bolt fastening the gearshift controls support on the body.
2. Slacken the two screws fastening the lever to the support, after eliminating the caulking.



– Raise the car and remove the exhaust piping, front section (see GROUP 10).
1. Loosen the rear fastenings and unscrew all the other fastenings of the gearbox controls support, to lower it.
2. Disconnect the gearshift control rod from the gearshift lever slackening the fastening bolt.
– Retrieve the gearshift lever complete with ball joint.



Alfawiki.nl

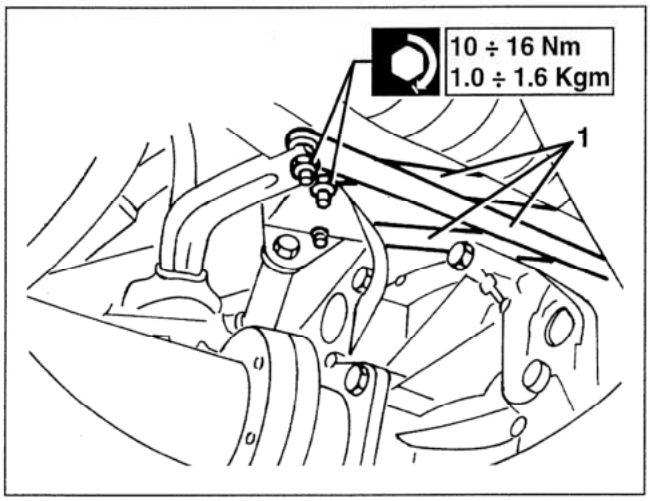
CONTROL WITH RODS AND TIE-RODS

GEARSHIFT CONTROL TIE-RODS

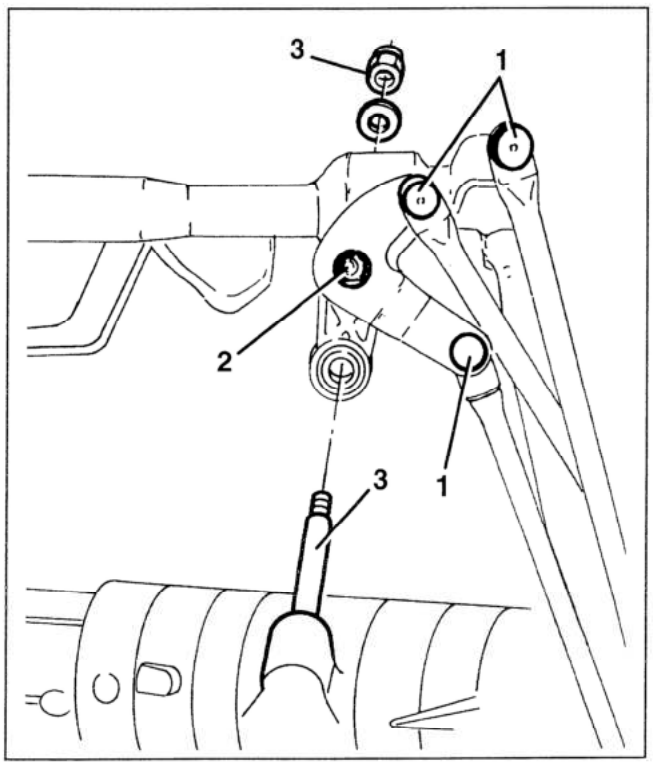
Removing / Refitting

– Set the car on a lift.

1. Work from under the car, disconnect the three tie-rods slackening the nuts fastening them to the bracket on the gearbox.



1. Disconnect the three tie-rods of the support fastened to the power steering, and then retrieve them.
2. If necessary remove the support, slacken the nut fastening it to the control rod.
3. Remove the support from the fastening pin on the steering box.



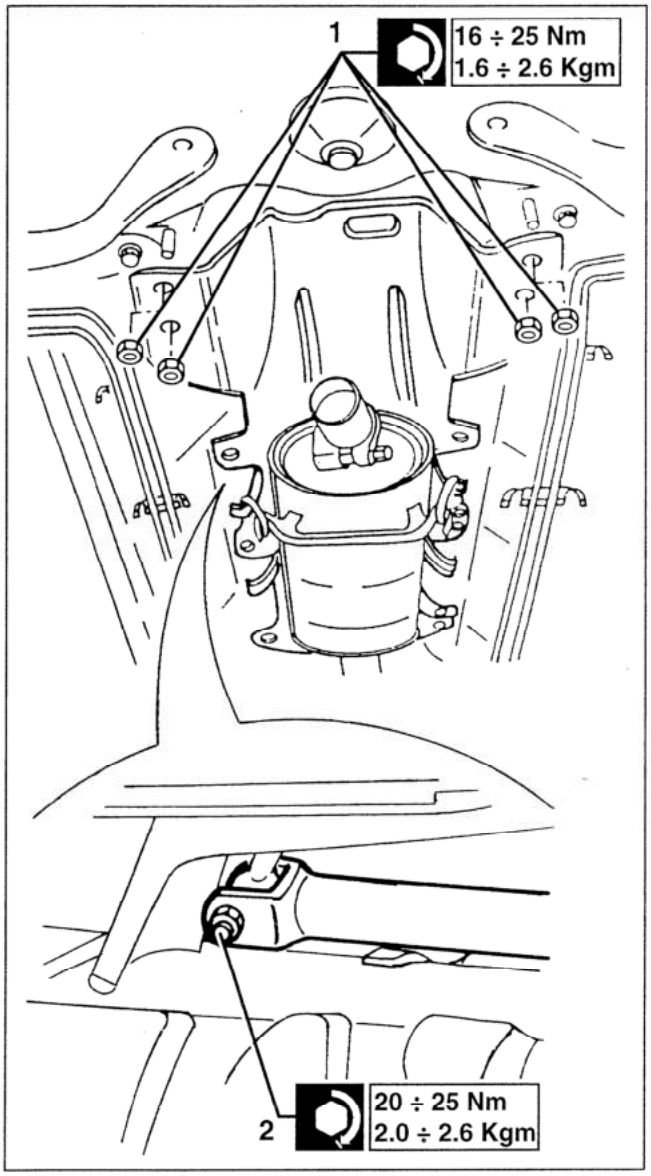
GEARSHIFT CONTROL ROD

Removing / Refitting

– Set the car on a lift.

– Remove the exhaust piping, front section (see GROUP 10).

1. Slacken the four front nuts and loosen the other screws of the gearbox controls support, to lower the gearbox and gain access to the control rod.
2. Disconnect the gearshift control rod from the gearshift lever slackening the fastening bolt.



Alfawiki.nl

SYNCHRONIZED REVERSE GEAR

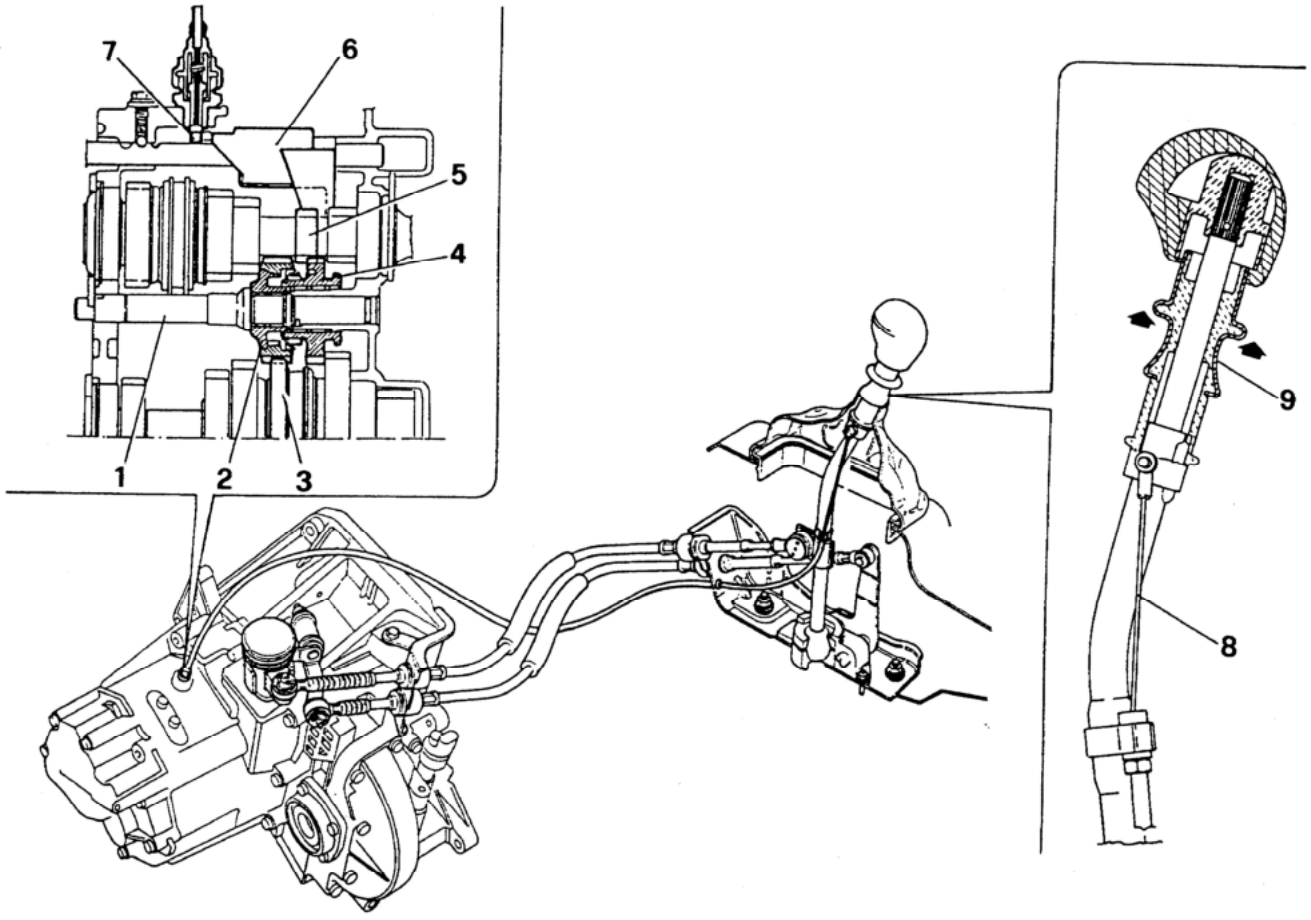
The version for the 6-cylinder engine has a synchronizer for reverse gear, which enables accurate and noiseless engagement.
The motion is reversed by the lay shaft (1) on which the following are to be found:

– a gear (2), with housing for the synchronizer, which constantly meshes with the gear (3) machined on the sleeve for engaging 1st and 2nd speed on the transmission shaft;

– a sliding gear (4) with synchronizer, which constantly meshes with the reverse gear (5) on the main shaft.

Reverse gear is engaged by the movement of the reverse gear selection rod with the corresponding fork (6) and consequently of the ssliding gear (4) which becomes integral with the gear (2) through the synchronizer.

A safety device prevents the inadvertent engagement of reverse gear. This device comprises a pin (7) which blocks the axial movement of the reverse gear selection rod; the pin is controlled by a flexible cable (8) operated by a sleeve (9) under the gearshift lever knob. Raising the sleeve (9), the cable (8) releases the pin (7), allowing the rod to move freely thereby enabling the engagement of reverse gear.



1. *Reverse gear layshaft*
2. *Reverse idler gear*
3. *1st and 2nd gear engagement sleeve*
4. *Reverse gear with synchronizer*
5. *Reverse driving gear*
6. *Reverse gear selection rod fork*
7. *Reverse gear selection rod release pin*
8. *Selection rod release pin control cable*
9. *Reverse gear selection rod release pin control sliding sleeve*

Alfawiki.nl

OUTSIDE GEARBOX CONTROLS

DESCRIPTION

The set of outside gearshifting controls differs in two types according to the type of gearbox used.

For the 2.0 T.S. 16v engine the traditional solution with rods and tie-rods has been adopted.

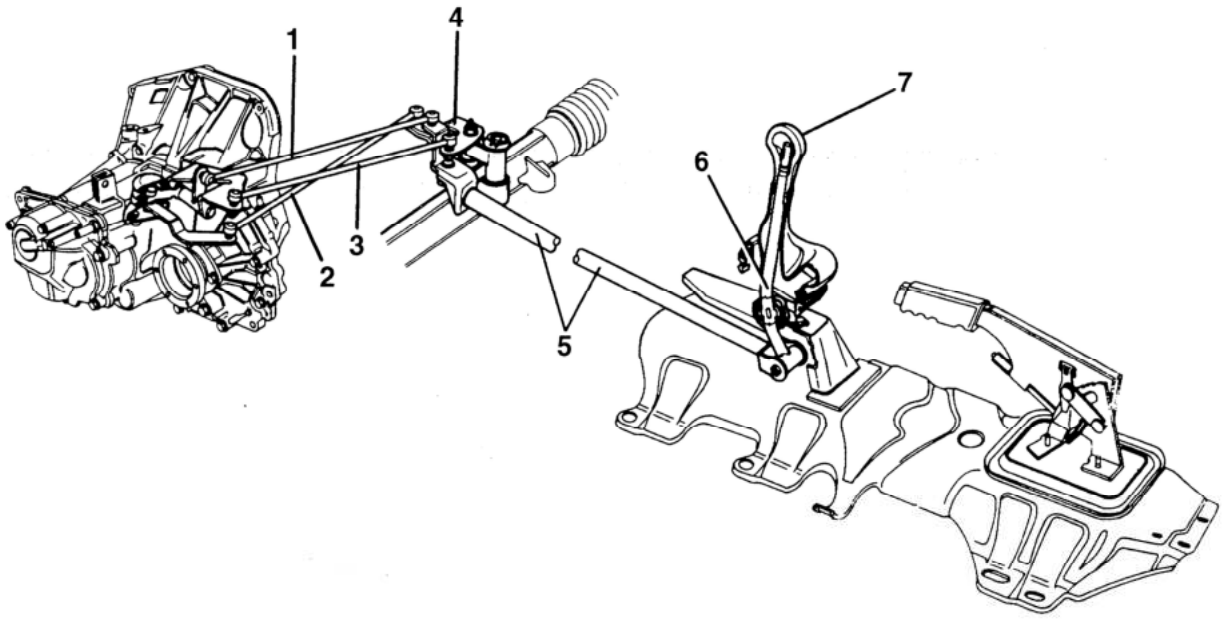
For the 3.0 V6 engine, a cable control system has been used which, in addition to improving the maintainability of the system, compared with the conventional system, it enables a considerable reduction of vibrations and the resulting noise, at the same time improving smoothness and precision in gear engagement: also for this version a gearbox control with synchronized reverse has been adopted: this is an innovative system which improves the engagement of reverse gear and prevents it from being engaged without synchronization.

This type of control is made with the addition of a supplementary cable, in addition to the two normal gear engagement and selection control cables.

The end of the cable, formed of a pin, locks the axial movement of the rreverse gear selection fork.

Raising the sleeve under the lever knob, the cable is pulled, therefore also the pin which leaves the movement of the fork free thereby allowing engagement of reverse gear.

VERSION WITH RODS AND TIE-RODS



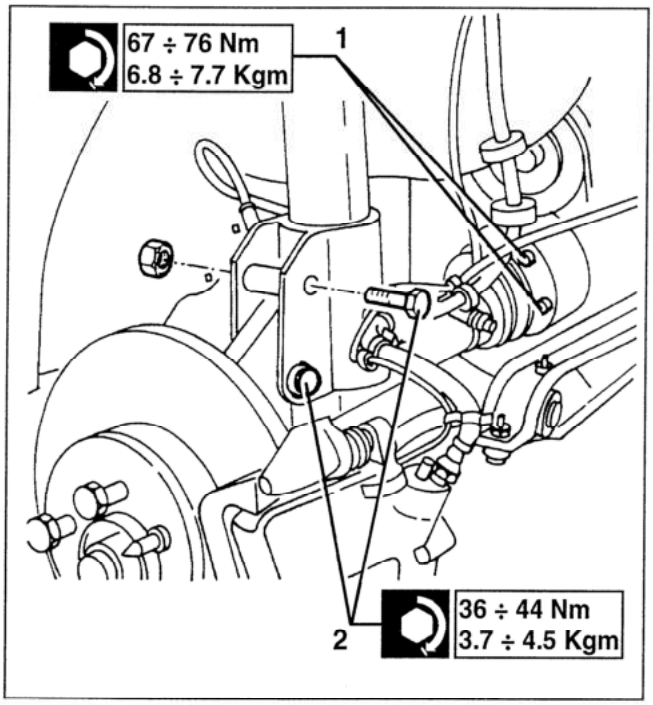
1. *Gear selection lever control tie-rod*
2. *Gear engagement lever control tie-rod*
3. *Reaction rod*
4. *Tie-rod relay support*
5. *Gear control rod*
6. *Gearshift lever*
7. *Gearshift lever knob*

Alfawiki.nl

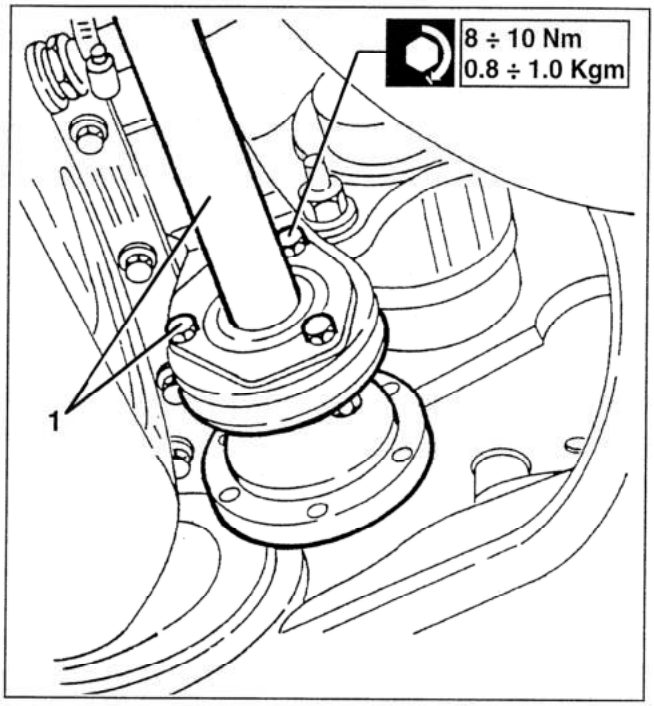
DIFFERENTIAL CARRIER OIL SEAL ENGINE SIDE

REPLACEMENT

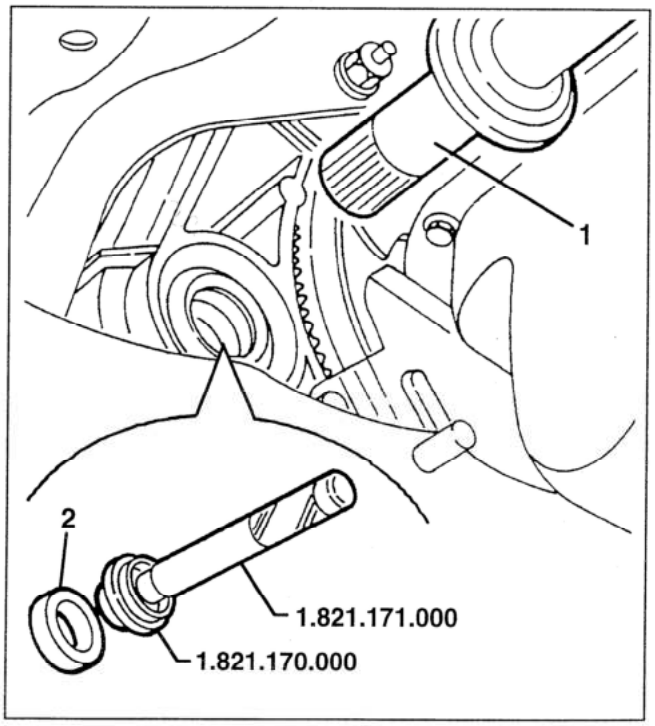
– Set the car on a lift.
– Disconnect the battery.
– Raise the car.
– Remove the left front wheel and mud flap.
– Working from the left wheelhouse, disconnect the electrical connection of the brake pad wear sensor.
– Release the ABS inductive sensor from the support bracket.
1. Slacken the screws fastening the right axle shaft from the intermediate shaft.
2. Slacken the two bolts fastening the right upright, then remove only the upper bolt.
– Move back the axle shaft just enough to disconnect it from the intermediate shaft.



1. Slacken the three bolts fastening the intermediate shaft.



1. Withdraw the intermediate shaft from the differential and withdraw the oil seal to be replaced.
2. Using tools no. 1.821.170.000 and no. 1.821.171.000 insert the new oil seal.



Alfawiki.nl

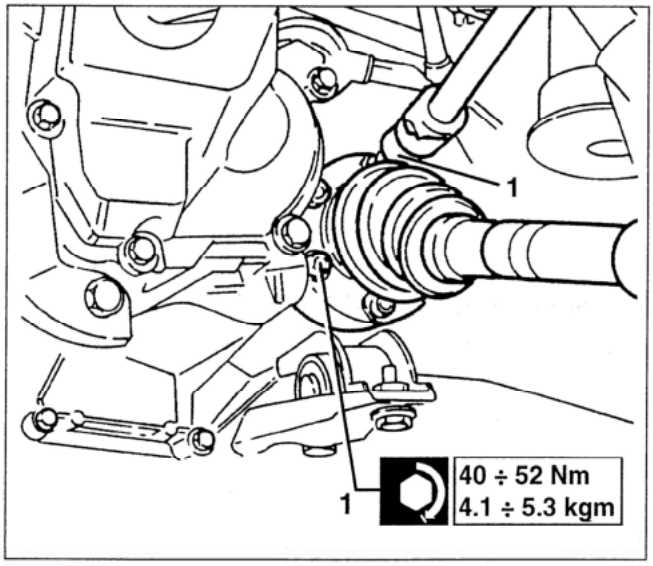
GEARBOX UNIT 1970 2959

ON-VEHICLE OPERATIONS

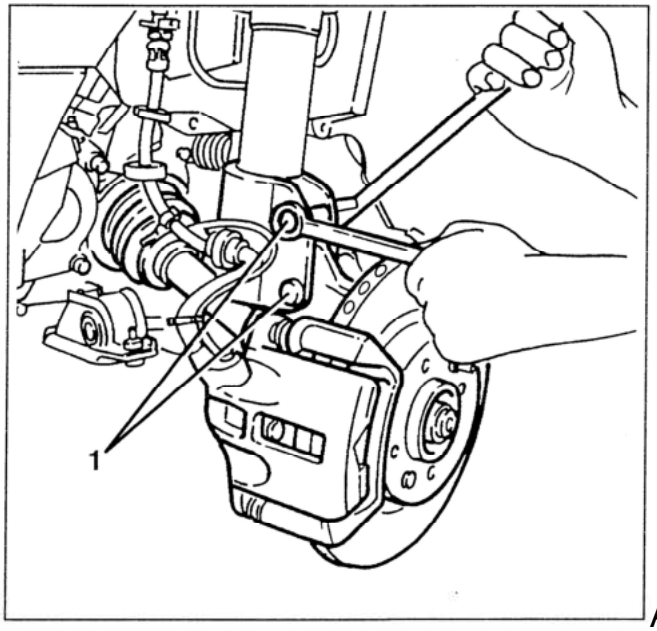
DIFFERENTIAL CARRIER OIL SEAL GEARBOX SIDE

Replacement

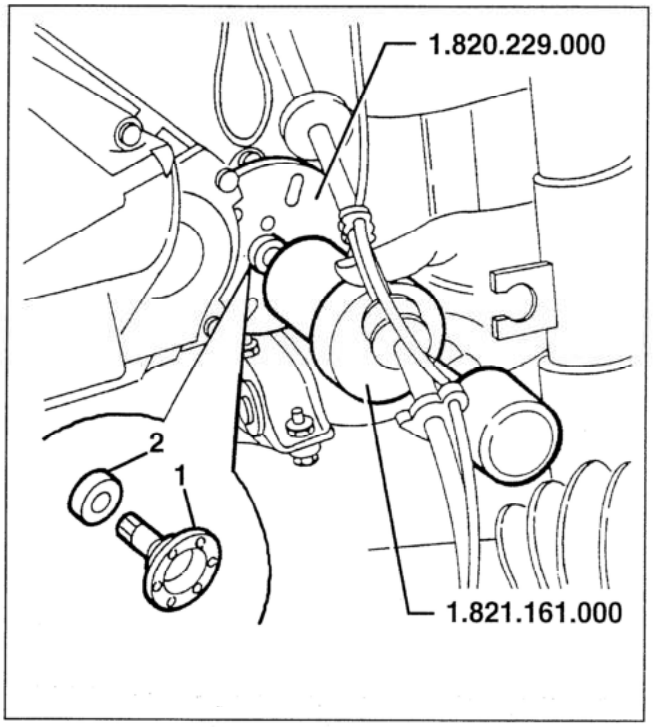
– Set the car on a lift.
– Disconnect the battery.
– Raise the car.
– Remove the left front wheel and mud flap.
– Working from the left wheelhouse, disconnect the electrical connection of the brake pad wear sensor.
– Release the ABS inductive sensor from the support bracket.
1. Unscrew the left axle shaft fastening screws from the differential.



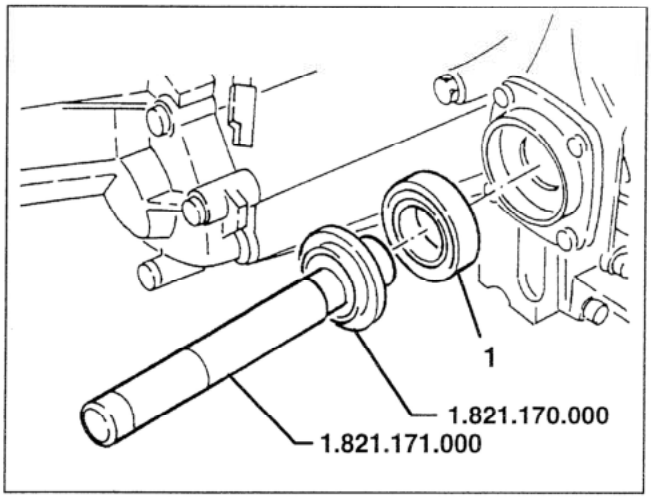
1. Slacken the two bolts fastening the left upright to the shock absorber, then remove only the upper bolt.



1. Using tools no. 1.820.229.000 and no. 1.821.161.000, remove the flange from the differential.
2. Prise off the seal to be replaced.

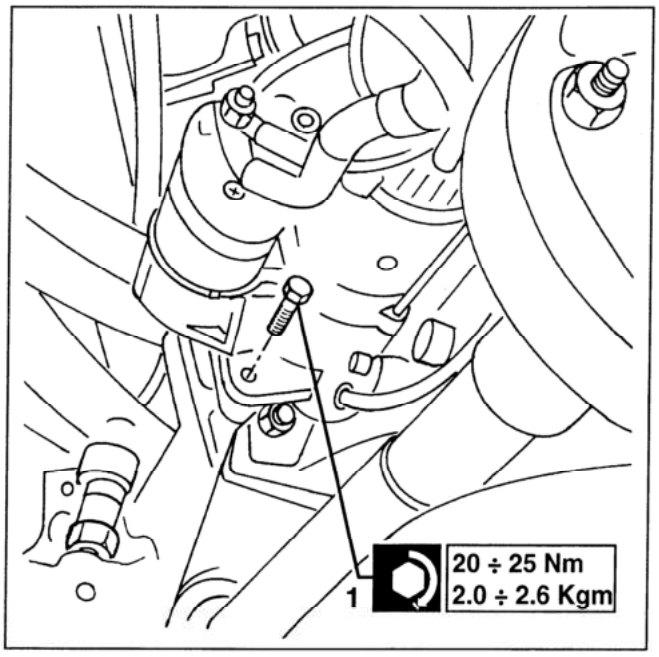


1. Using tools no. 1.821.170.000 and no. 1.821.171.000 insert the new oil seal.
Complete refitting reversing the sequence followed for removal.

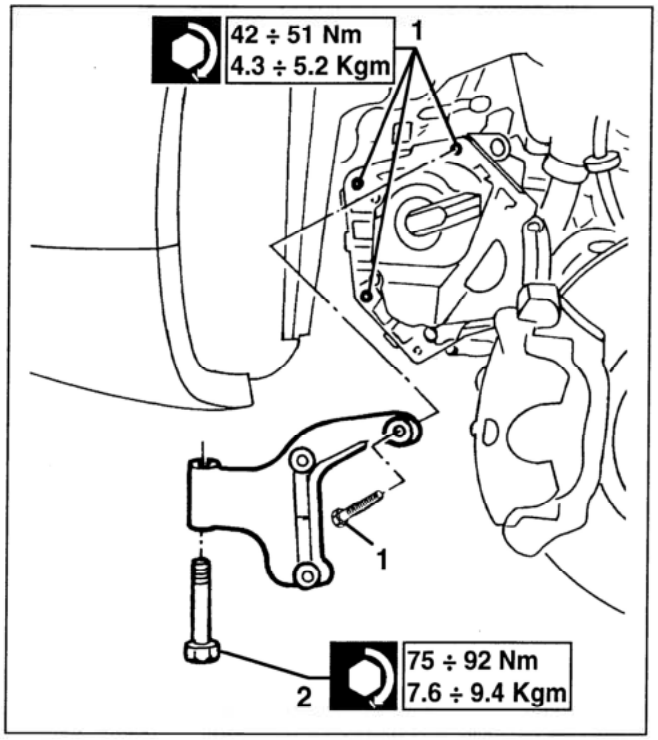


Alfawiki.nl

1. Slacken the three screws fastening the starter motor to the gearbox.



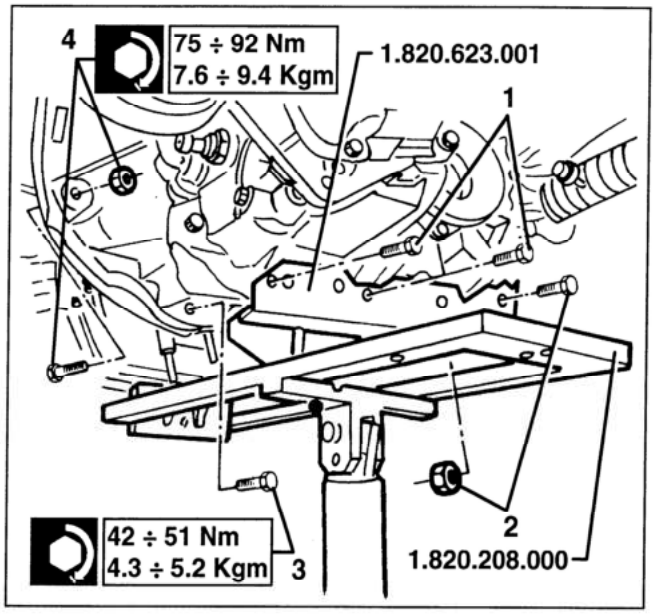
1. Slacken the three screws fastening the rear gearbox support to the gearbox itself.
2. Slacken the bolt fastening the support to the body and remove it.



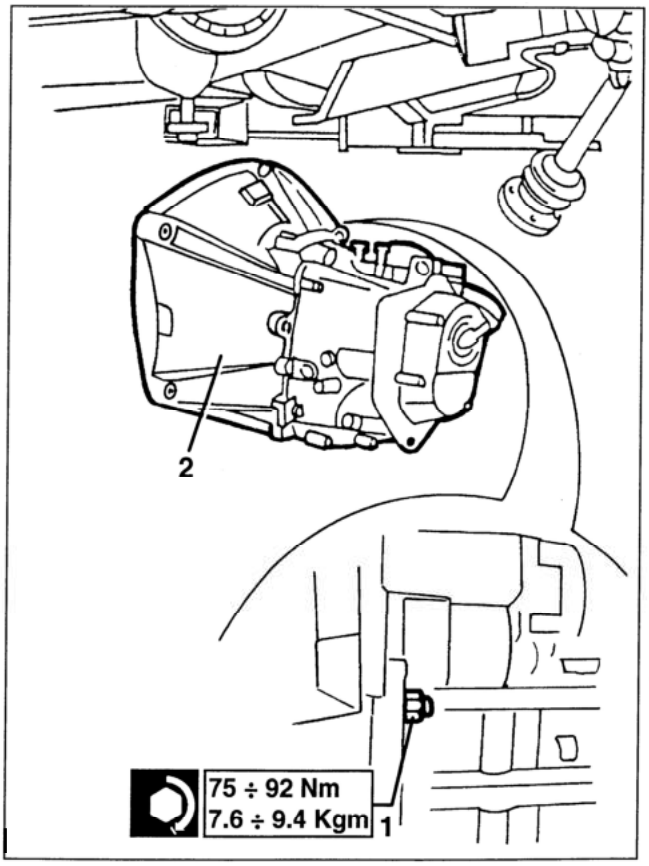
1. Slacken the two lower screws fastening the gearbox cover and in the holes fasten bracket no. 1.820.623.001 with support no. 1.820.208.000.

NOTE: use screws slightly longer than the ones removed.

2. Add a bolt of suitable size in the hole on the right.
3. Slacken the two fastening screws and remove the lower cover.
4. Slacken the bolt fastening the gearbox to the engine.

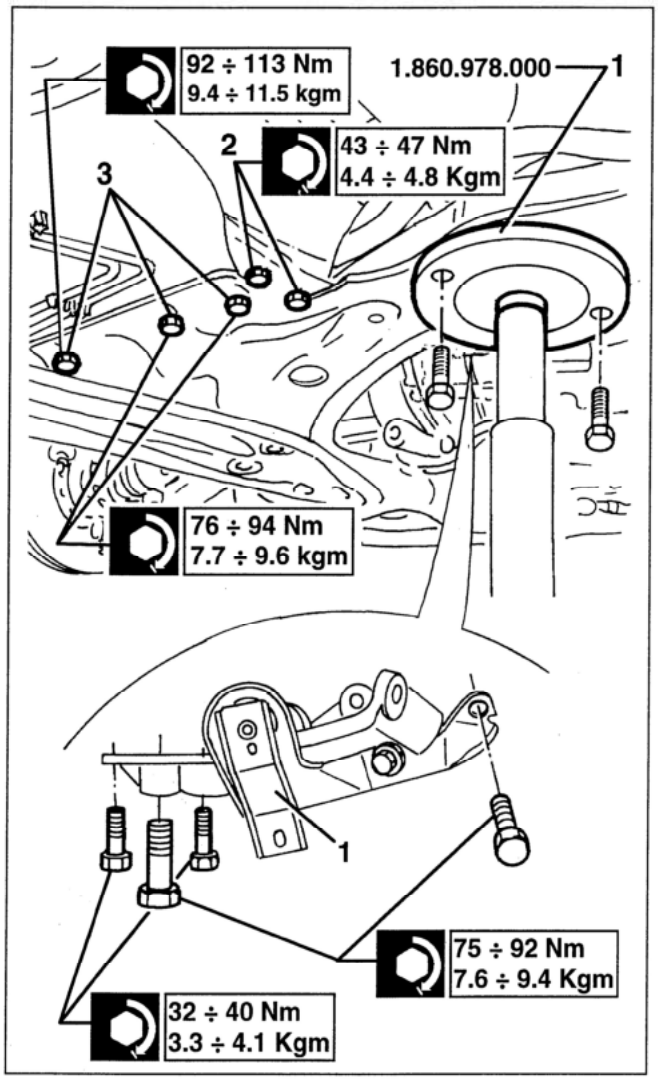


1. Slacken the nut fastening the gearbox to the engine.
2. Lower the gearbox disconnecting it from the engine.

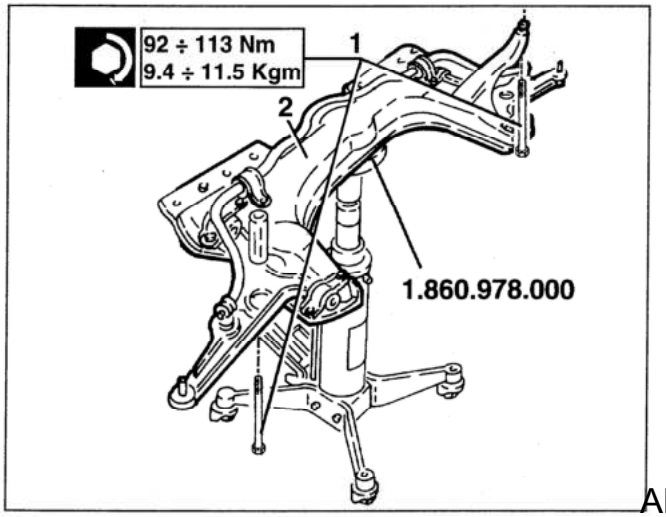


Alfawiki.nl

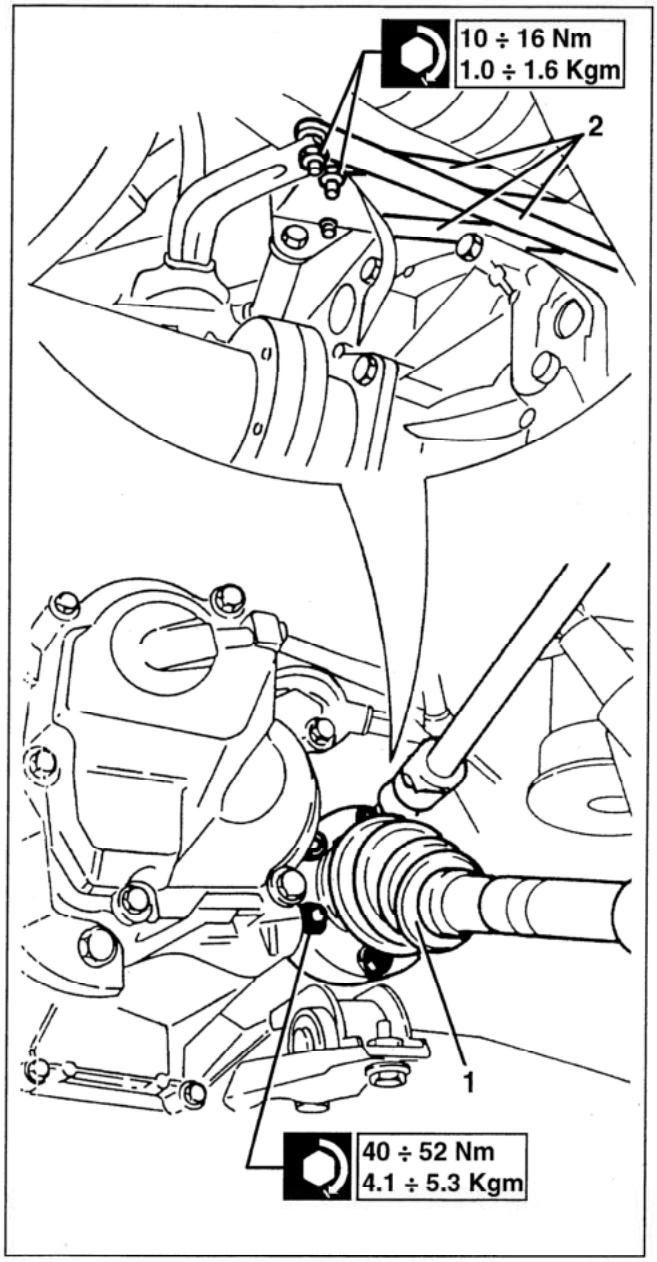
1. Remove the rear engine support.
2. Install tool 1.860.978.000 on a hydraulic jack. Fasten the tool to the centre of the crossmember.
3. Slacken the six rear screws fastening the crossmember to the body.



1. Slacken the two front screws fastening the crossmember to the body.
2. Lower the front crossmember and remove it.

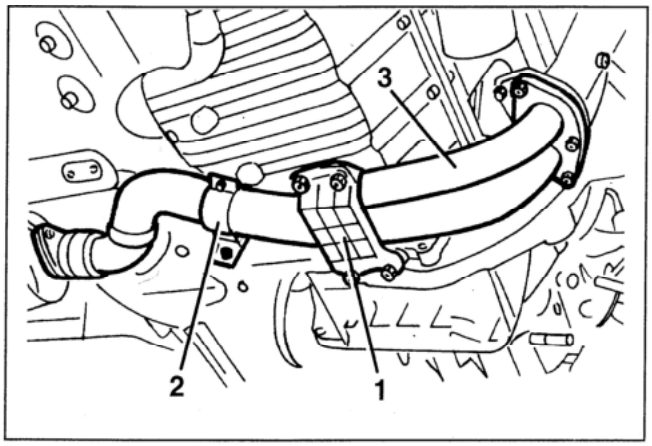


1. Slacken the six fastening bolts and disconnect the left constant velocity joint from the differential side axle shaft.
2. Disconnect the three gearbox control rods.



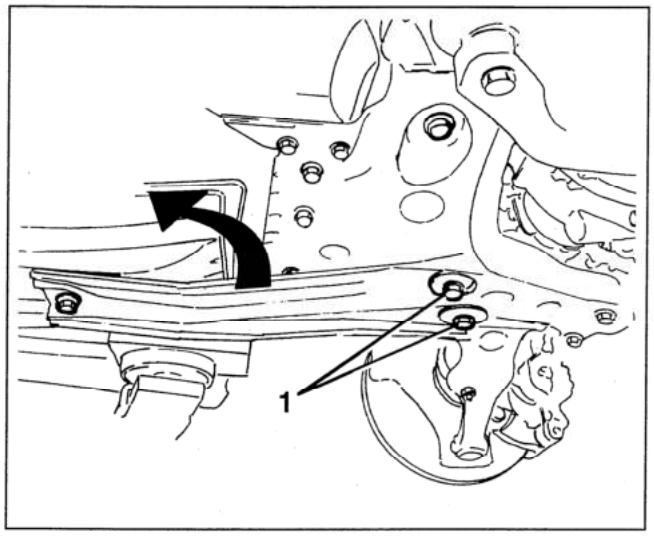
Alfawiki.nl

1. Remove the reinforcement under the exhaust pipe.
2. Disconnect the exhaust pipe fastening bracket.
3. Remove the exhaust pipe, front section.

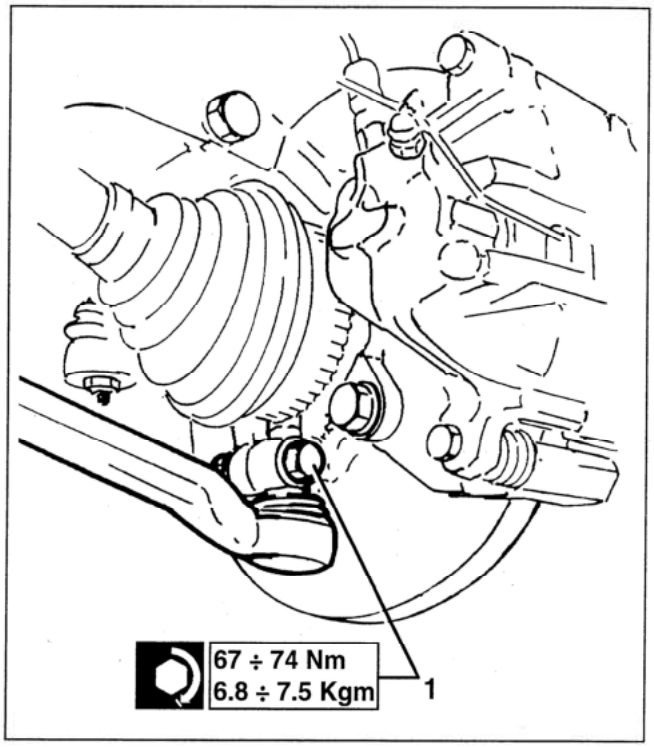


NOTE: retrieve the lambda probe wiring carefully to avoid jerking or damaging it.

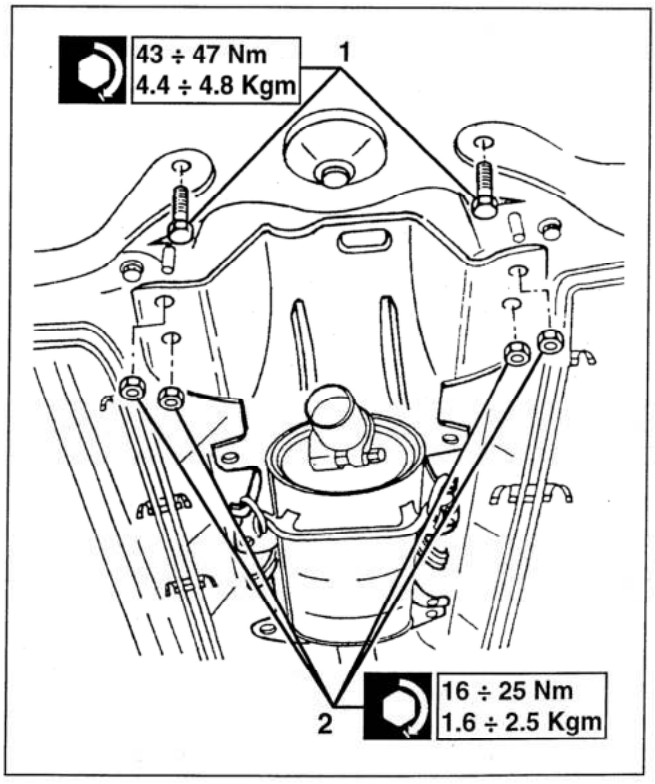
1. Removing the two screws, disconnect the front of the two front crossmember reinforcement struts and turn them rearward removing one of the rear screws.



1. For both sides, slacken the two screws fastening the front crossmember to the wheel hub.

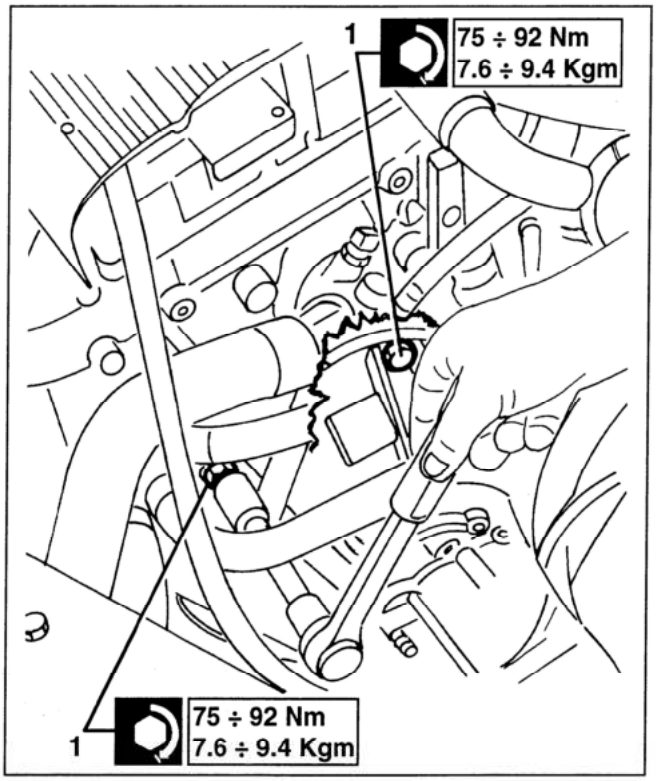


1. Slacken the two screws fastening the power steering to the front crossmember.
2. Slacken the four front nuts and slacken the other fastening screws of the gearbox controls support, which must be slightly lowered to make it possible to free the front crossmember.



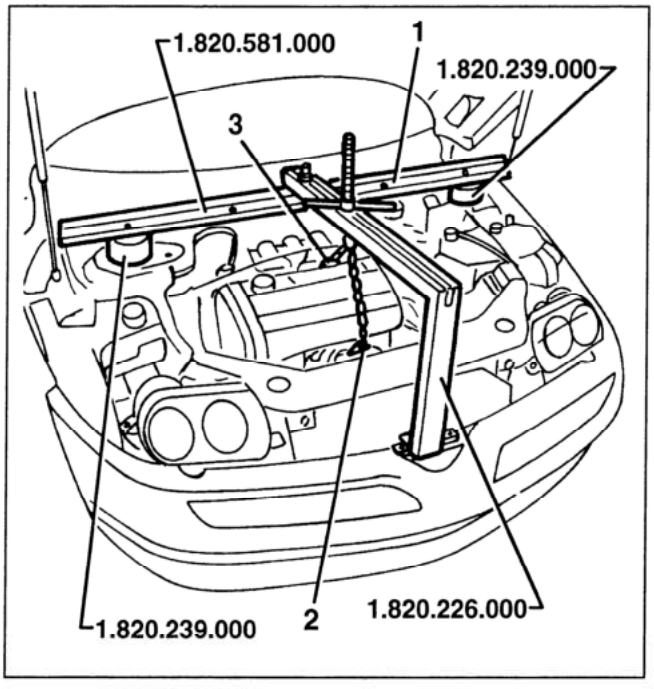
Alfawiki.nl

1. Slacken the two upper screws fastening the gearbox to the engine.

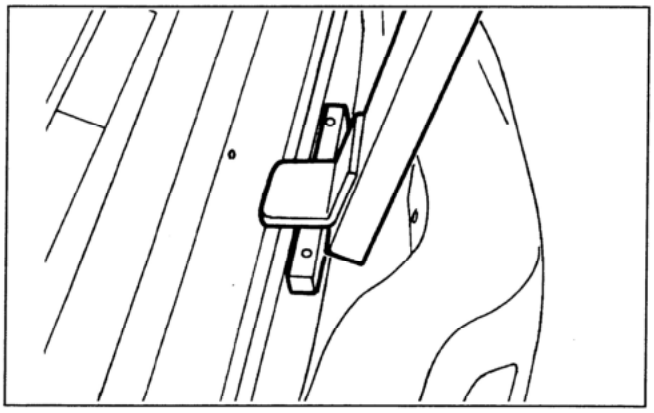


1. Position engine support 1.820.226.000, with supports 1. 820.239.000 and cross rail 1.820.581.000.
2. Place a support square on the front of the crankcase.
3. Place a support square on the rear of the crankcase, between two injectors.

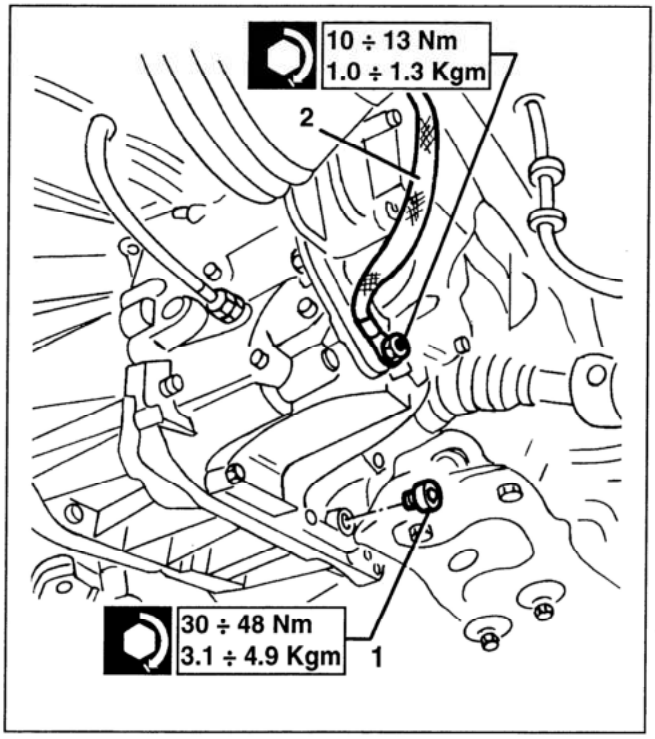
– Set a chain between the two squares and the support, hooking the engine to the support.



CAUTION:
To avoid damaging the power steering piping housed at the front of the radiator, interpose a suitable thickness between the front connection of the tool and its resting surface.



– Raise the car.
1. Slacken the plug and drain the gearbox-differential oil recovering it in a suitable recipient.
2. Disconnect the earth braid from the gearbox.

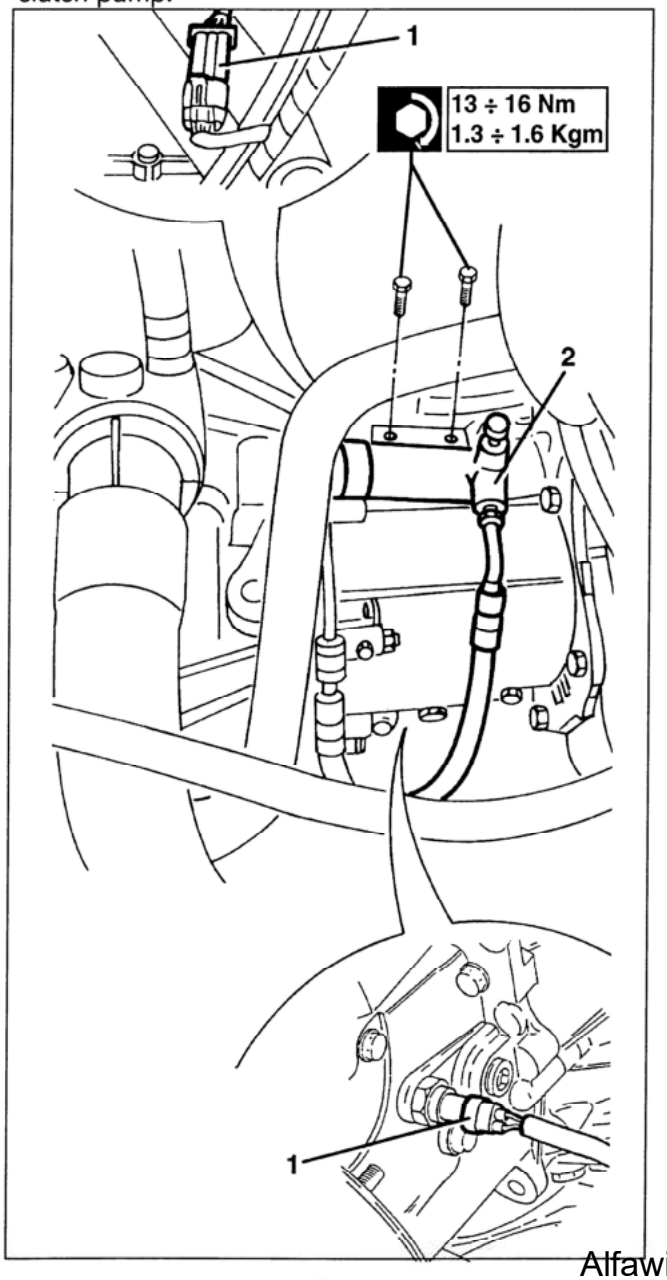


Alfawiki.nl

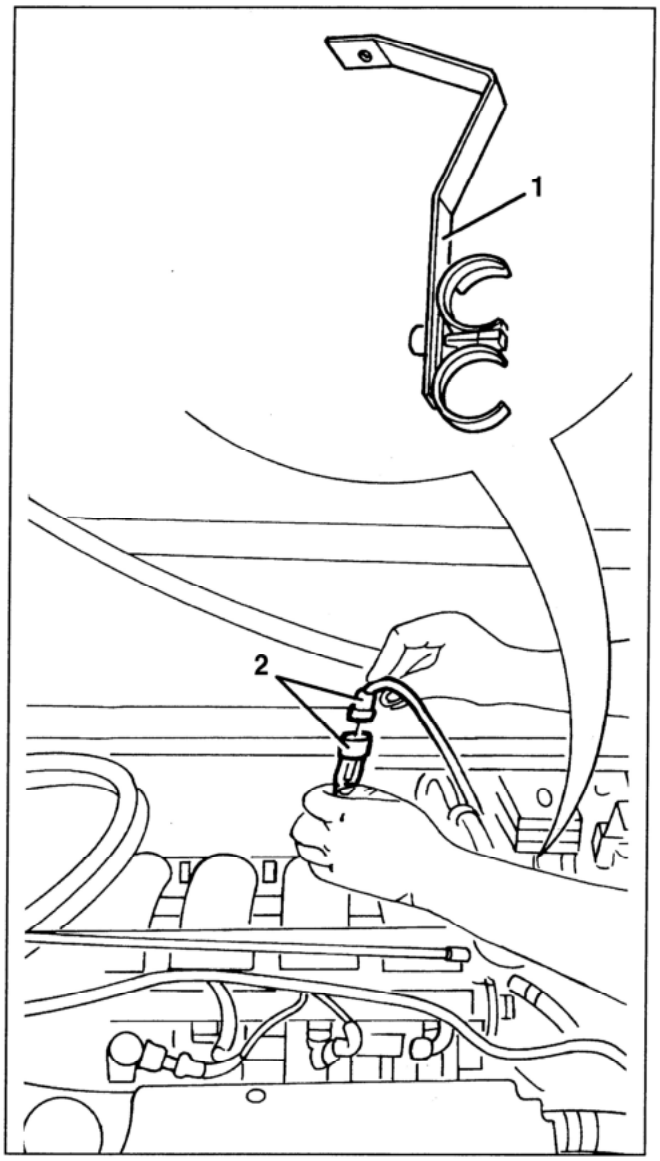
GEARBOX UNIT 1970

REMOVING / REFITTING

– Set the car on a lift.
– Disconnect the battery.
– Remove the front wheels and gravel guards (see GROUP 70).
– Remove the engine compartment protection, right-hand side (see GROUP 70).
– Remove the air cleaner unit complete with tray and inlet sleeve and bracket (see GROUP 10).
– Move aside the injection wiring, freeing access to the gearbox.
1. Disconnect the connections of the reverse switch and tachometric sensor from the gearbox.
2. Slacken the two screws and remove the clutch cylinder from the gearbox, moving it upwards: in fact the cylinder is restrained by the pipe leading from the clutch pump.

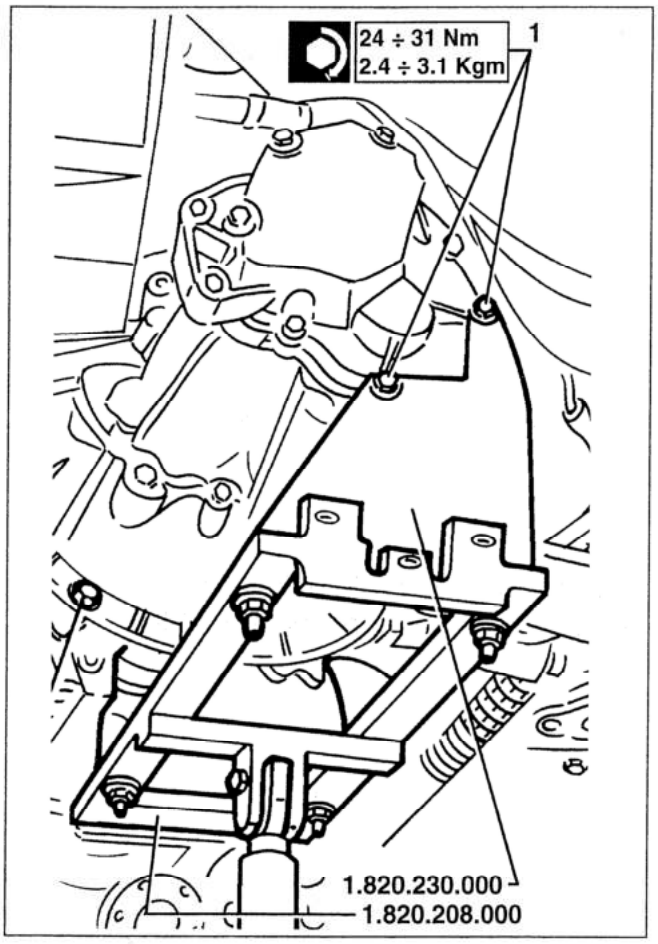


1. Remove the heater pipe fastening clamps from the throttle body.
2. Disconnect the connection of the lambda probe, disconnecting it from the stay clamp.

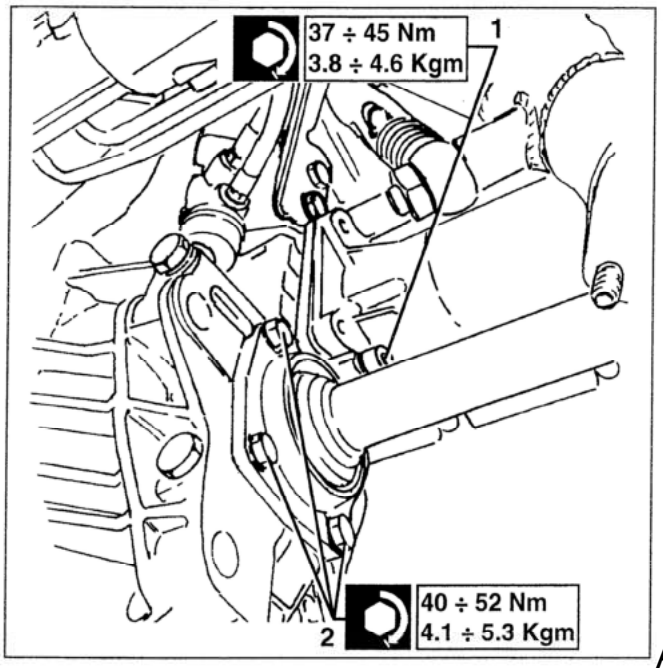


Alfawiki.nl

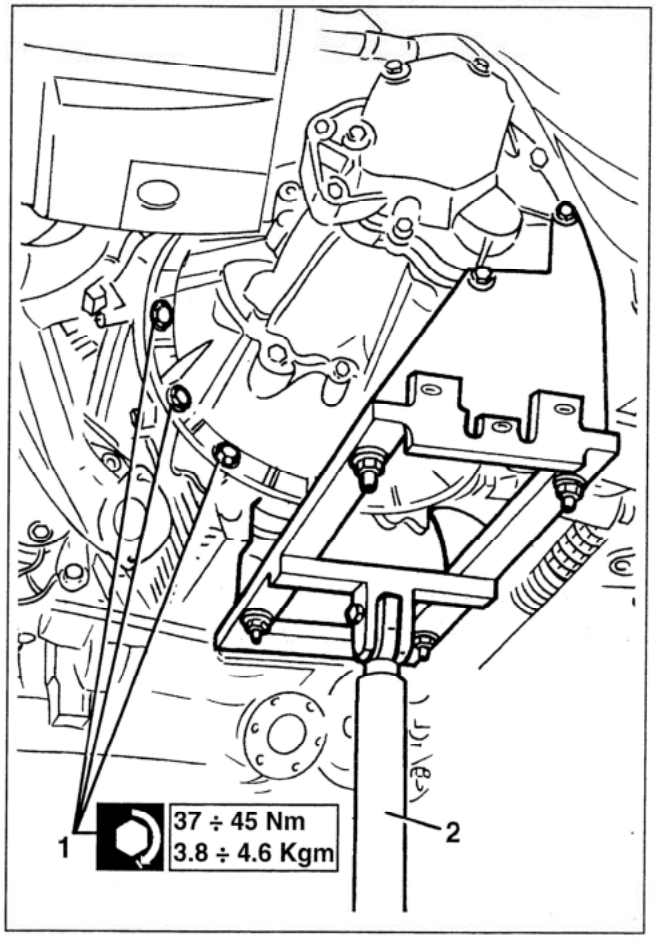
1. Slacken two of the screws fastening the gearbox cover and fasten bracket no. 1.820.230.000 and support no. 1.820.208.000.
2. Using a hydraulic hoist support the gearbox unit.



1. Slacken the rear Allen screw fastening the engine to the gearbox.
2. Slacken the four screws fastening the intermediate shaft support to the differential.

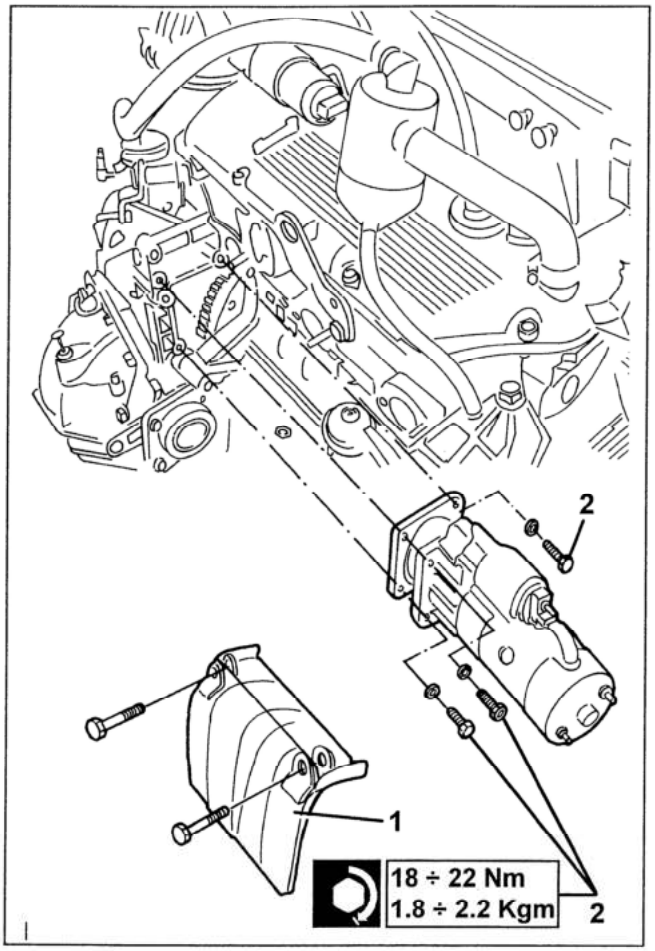


1. Slacken the three remaining screws fastening the gearbox to the engine.
2. Move the gearbox away from the engine and lower it using the hydraulic jack.

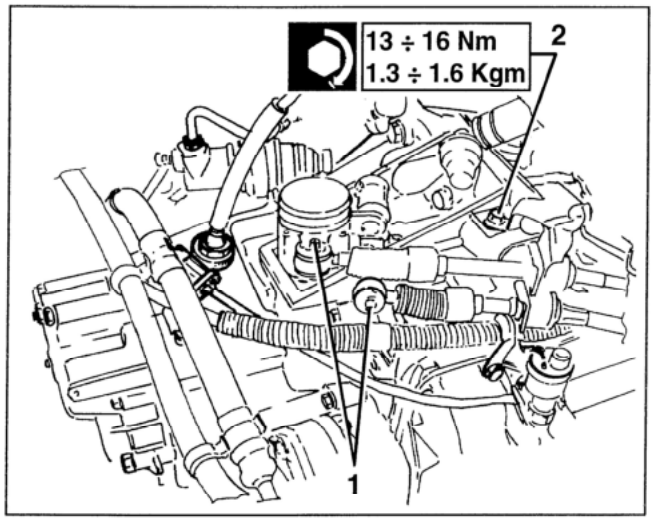


Alfawiki.nl

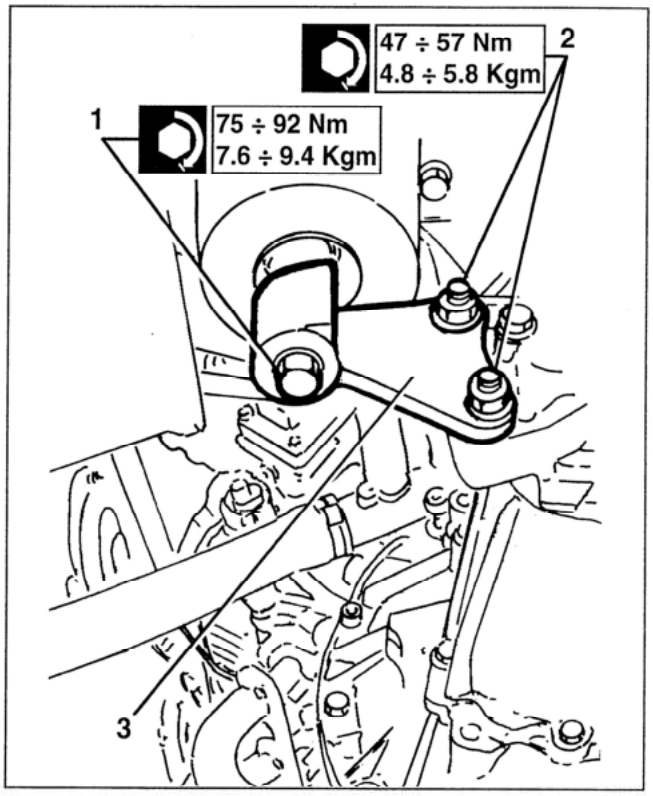
1. Slacken the screws fastening the starter motor heat shield.
2. Slacken the starter motor fastening screws.



1. Remove the retainer clamps and remove the gearbox control cables from the pins.
2. Slacken the upper screw fastening the gearbox control cables support bracket.

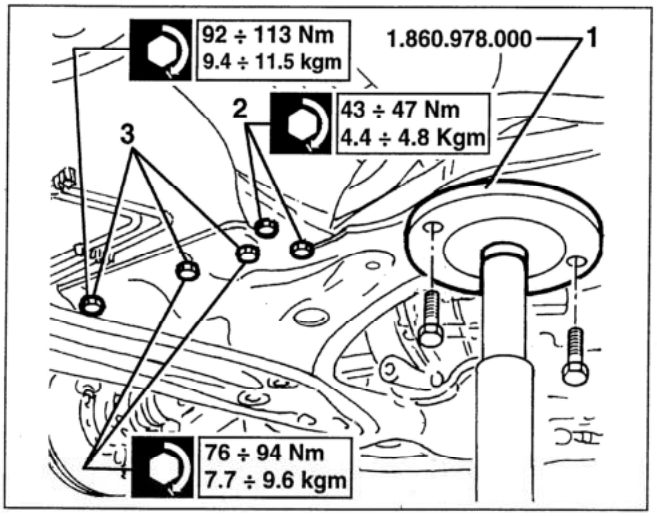


1. Slacken the screw fastening the rear gearbox support.
2. Slacken the nuts fastening the support to the gearbox.
3. Remove the support.

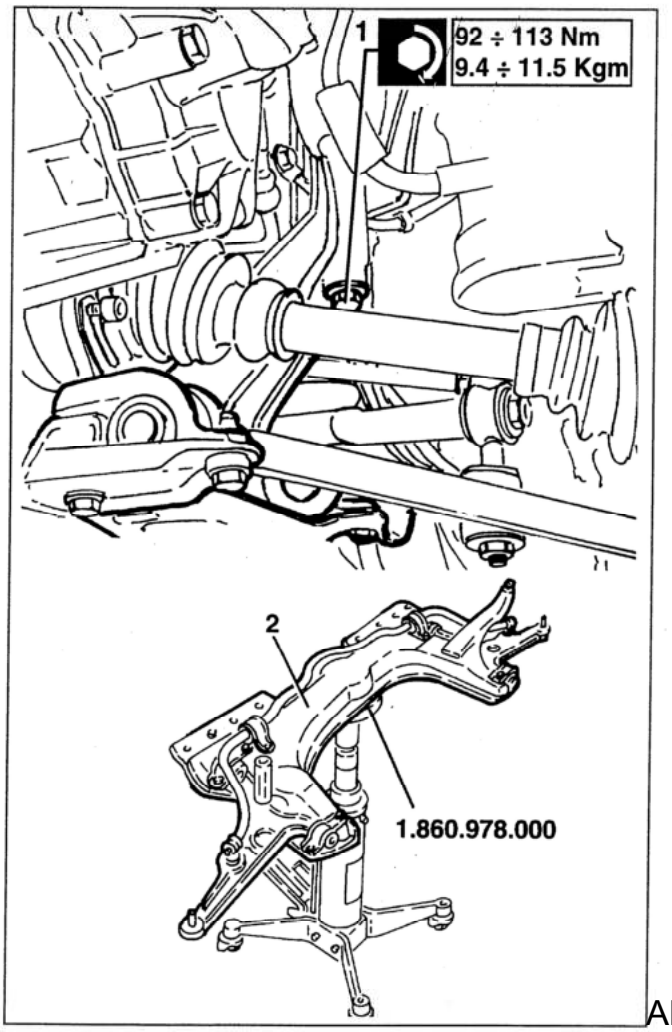


Alfawiki.nl

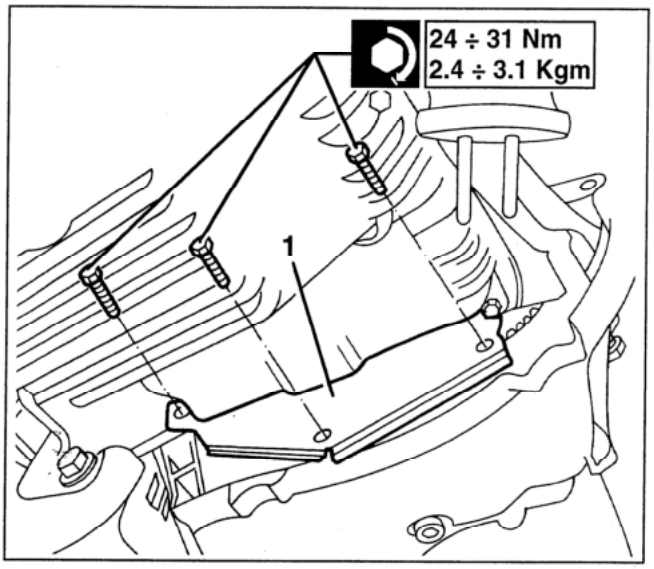
– Install tool 1.860.978.000 on a hydraulic jack.
1. Fasten the tool to the centre of the crossmember
2. Slacken the nuts fastening the crossmember to the gearbox controls support.
3. Slacken the screws fastening the crossmember to the body.



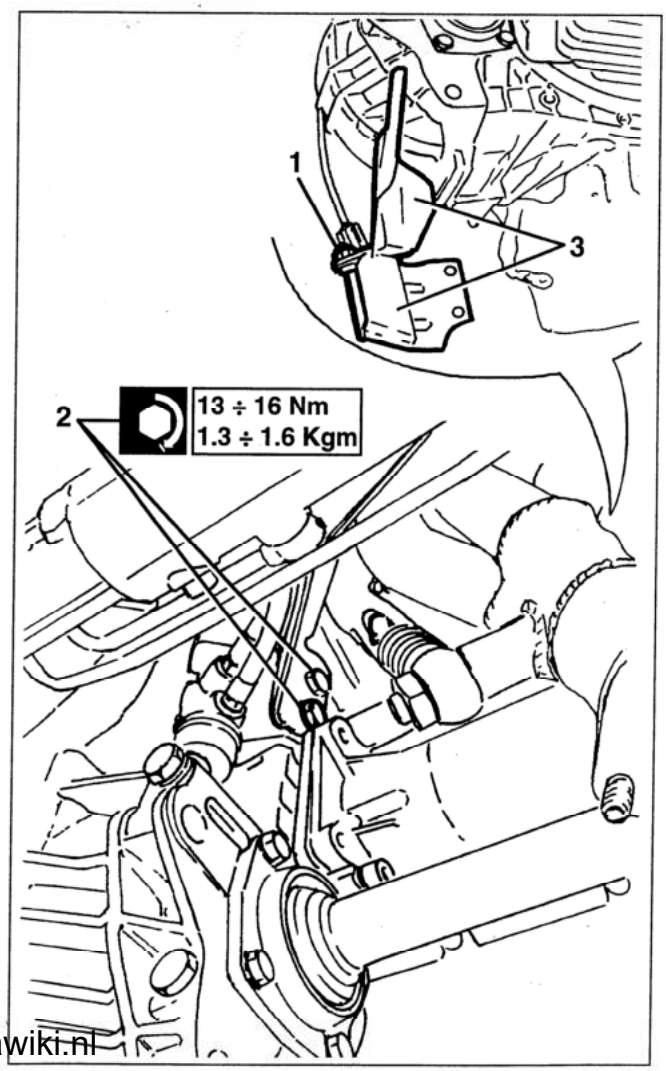
1. Slacken the screw on each side fastening the upper crossmember.
2. Slowly lower the hydraulic jack and remove the crossmember complete with wishbones and stabilizer bar.



1. Slacken the screws fastening the lower flywheel cover and remove it.

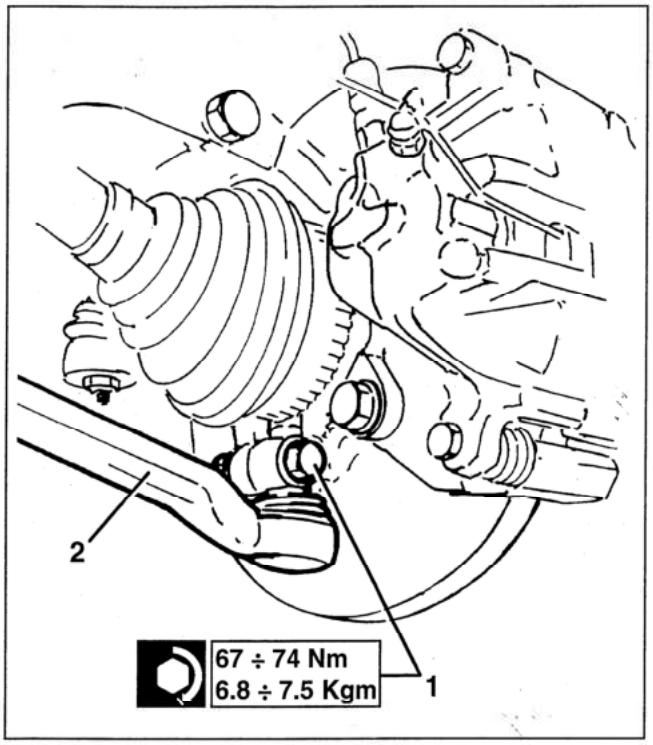


1. Slacken the two nuts fastening the upper cover of the gearbox control cables.
2. Slacken the two screws fastening the lower cover of the gearbox control cables.
3. Retrieve the two covers.

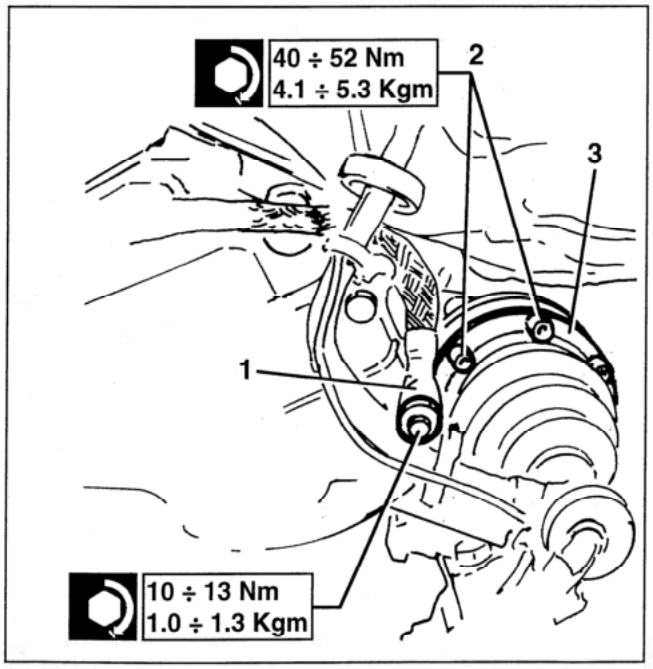


Alfawiki.nl

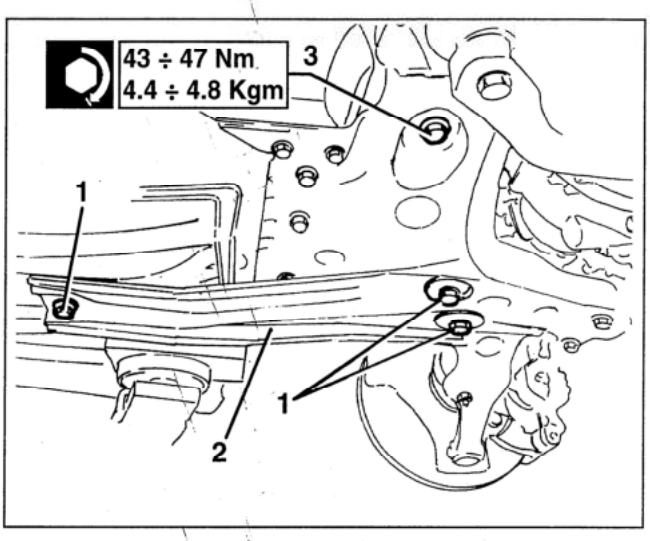
1. Working from both sides of the car, slacken the bolt fastening the suspension wishbone to the wheel hub.
2. Withdraw the ball pin from the suspension wishbone.



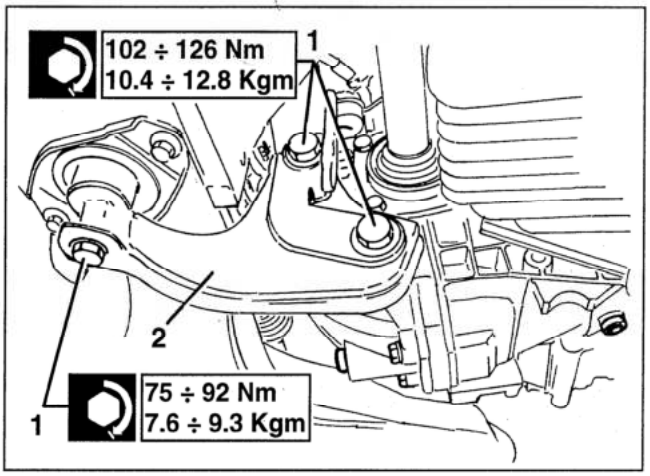
1. Working on the left-hand side of the car, slacken the nut and disconnect the earth braid from the gearbox.
2. Slacken the six bolts and disconnect the axle shaft from the differential.
3. Retrieve the safety plates.



1. Working from under the car, slacken the four screws fastening each of the front crossmember reinforcement struts.
2. Retrieve the reinforcement struts.
3. Slacken the screws fastening the steering box to the crossmember.

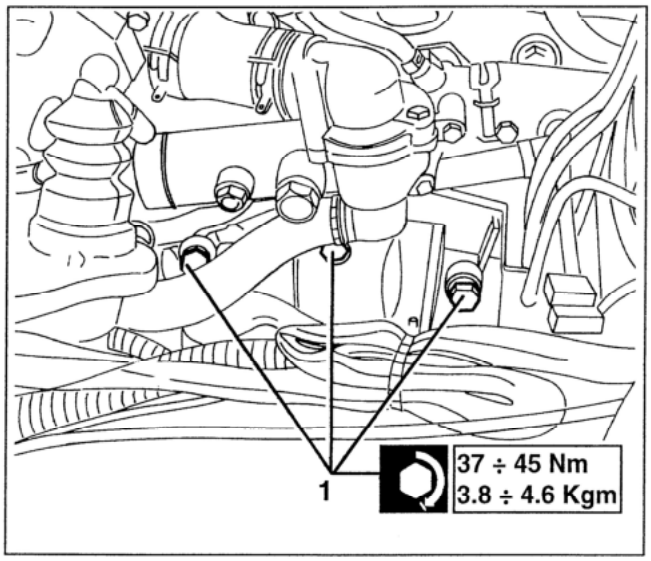


1. Slacken the three fastening screws.
2. Remove the engine rear support.

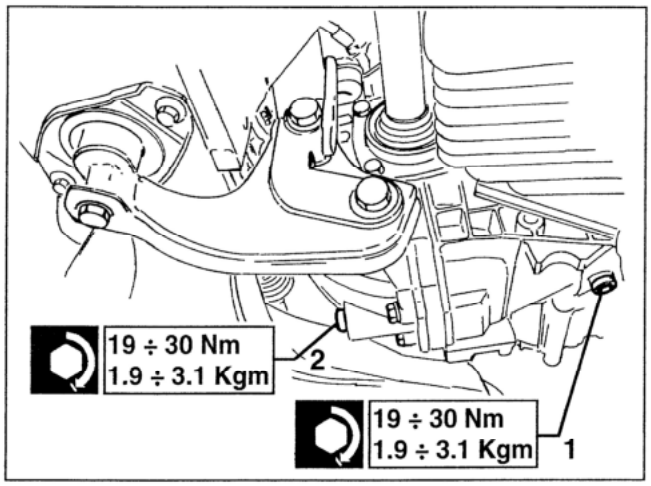


Alfawiki.nl

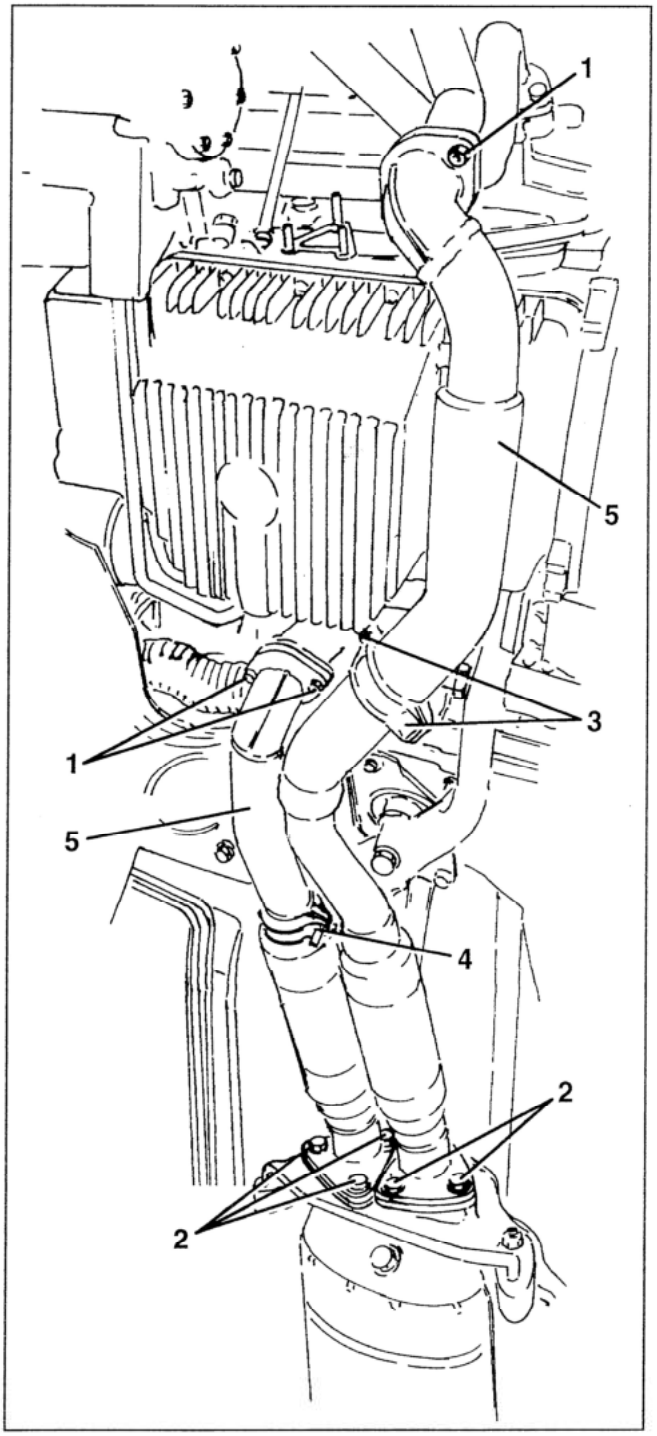
1. Slacken the three upper screws fastening the gearbox cover to the crankcase.
2. Raise the gearbox oil level dipstick.



– Raise the car.
– Set a suitable recipient under the engine compartment.
1. Slacken the plug and drain the gearbox oil.
2. Slacken the plug and drain the differential oil.



1. Slacken the nuts fastening the front exhaust pipes to the exhaust manifold.
2. Slacken the bolts fastening the pipes to the catalyst.
3. Slacken the bolt and disconnect the collar.
4. Slacken the nut and remove the collar.
5. Remove the front exhaust pipes.

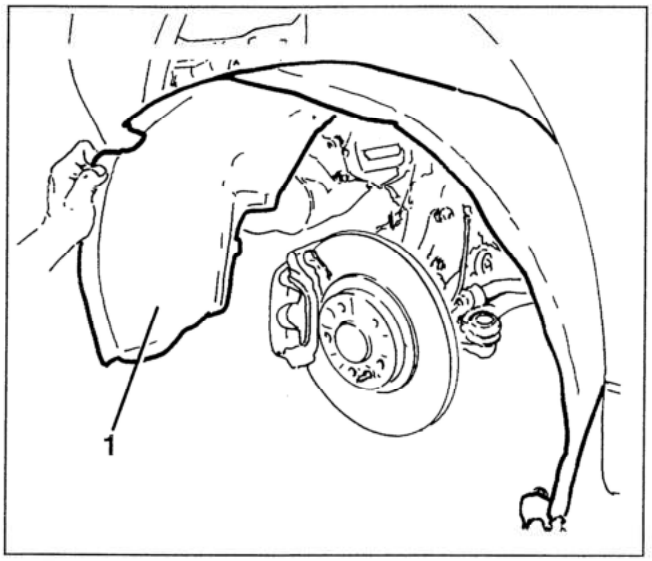


Alfawiki.nl

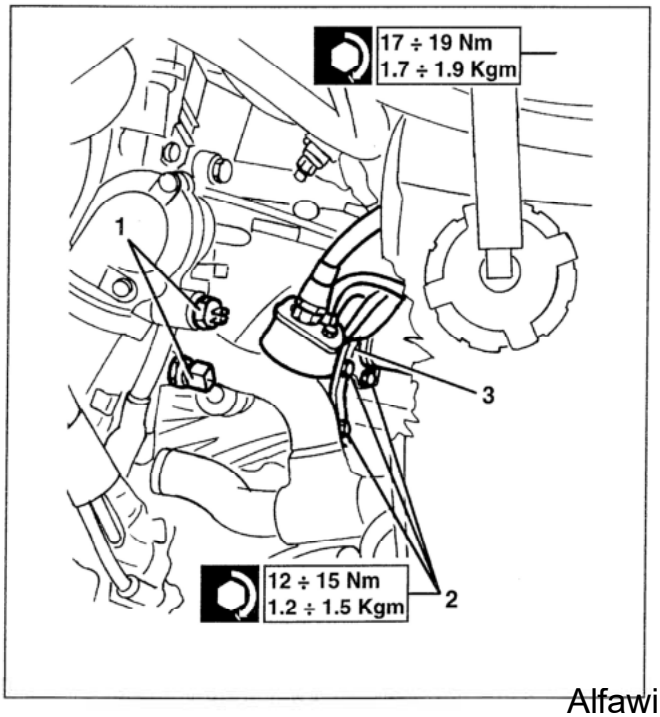
GEARBOX UNIT 2959

REMOVING/REFITTING

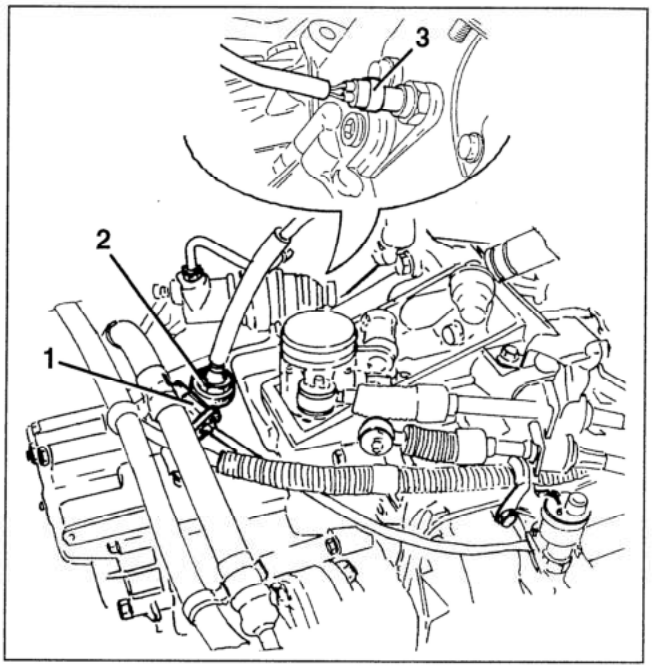
– Set the car on a lift.
– Disconnect the battery.
– Remove the front wheels.
1. Remove the left gravel guard.



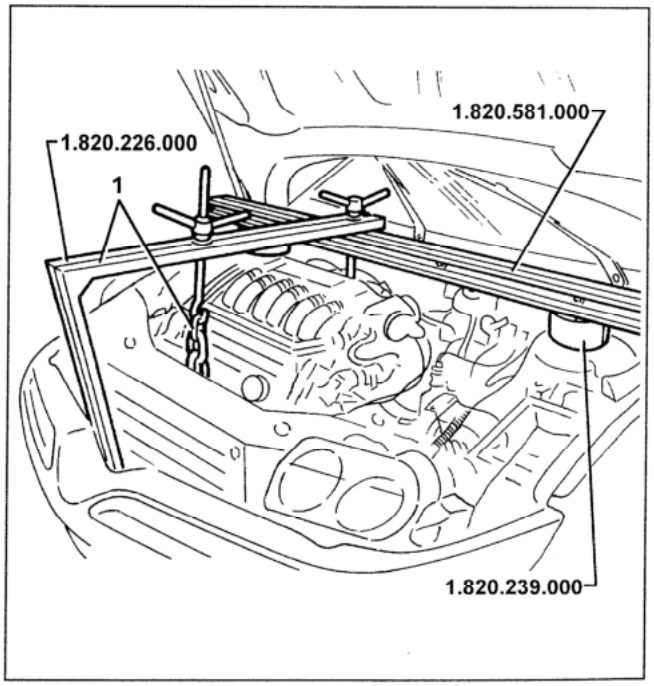
– Remove the engine compartment protection, right-hand side (see GROUP 70).
– Remove the air cleaner unit complete with inlet sleeve and tray with fastening bracket (see GROUP 10).
1. Disconnect the electrical connections of the engine temperature sensors
2. Slacken the three screws fastening the clutch cylinder bracket.
3. Move the cylinder aside without disconnecting the pipes.



1. Disconnect the electrical connection of the mileage recorder sensor.
2. Disconnect the reverse gear release cable from the gearbox.
3. Disconnect the electrical connection of the reversing switch.



1. Using tools 1.820.239.000, 1.820.581.000 and 1.820.226.000 suitably support the engine with a chain.



Alfawiki.nl

GEARBOX 21

INDEX

GEARBOX UNIT 2959

- Removing/refitting 1

GEARBOX UNIT 1970

- Removing / refitting 7

GEARBOX UNIT 1970 2959

- On-vehicle operations 12
  - Differential carrier oil seal gearbox side . 12
  - Differential carrier oil seal engine side... 13

OUTSIDE GEARBOX CONTROLS

- Description 14
  - Version with rods and tie-rods 14
  - Synchronized reverse gear 15
- Control with rods and tie-rods 16
  - Gearshift control tie-rods 16
  - Gearshift control rod 16
  - Gearshift lever 17
- Cable control 18
  - Gear engagement and selection cables . 18
  - Reversing gear release cable 19
  - Gearshift lever 19
  - Gearshift lever knob 20

Alfawiki.nl