

*Spider - Gtv*

RIGHT-HAND DRIVE VERSION

REPAIR  
INSTRUCTIONS

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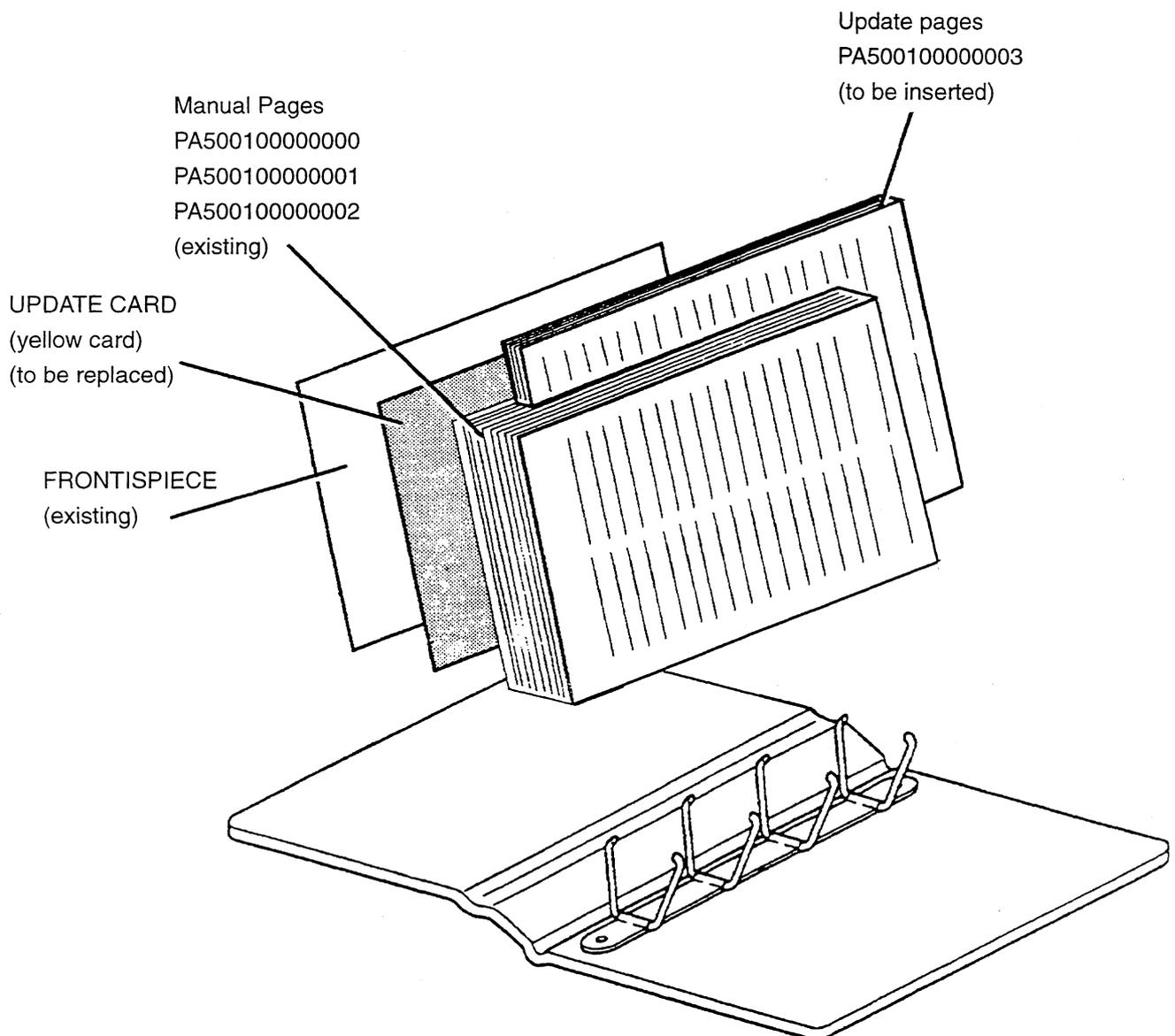


## INSTRUCTIONS FOR INSERTING THE TECHNICAL DOCUMENTATION IN THE FOLDER

*Spider*  
*Gtv*  
RIGHT-HAND DRIVE VERSION  
**REPAIR  
INSTRUCTIONS**

For placing the documentation concerning update PA500100000003 in "Spider - Gtv - R.H. DRIVE VERSION - Repair Instructions ", you are recommended to follow the instructions given in the UPDATE CARD (yellow).

The illustration below schematically shows the composition of the publication.



# UPDATE CARD

*Spider*  
*Gtv*

RIGHT-HAND DRIVE VERSION

## REPAIR INSTRUCTIONS

UPDATE CARD				
UPDATE (DATE)	MODEL	SECTION	PAGE	
			SUBST.	ADDED
2 (10/1997)	Spider-Gtv R.H. DRIVE	00	1	
3 (10/1998)	Spider-Gtv R.H. DRIVE	00	* 1 to 2	
2 (10/1997)	Spider-Gtv R.H. DRIVE	00	3	
3 (10/1998)	Spider-Gtv R.H. DRIVE	00	4 to 5	
3 (10/1998)	Spider-Gtv R.H. DRIVE	10	Index	
3 (10/1998)	Spider-Gtv R.H. DRIVE	10	1	
3 (10/1998)	Spider-Gtv R.H. DRIVE	10	5	
3 (10/1998)	Spider-Gtv R.H. DRIVE	33	2	
3 (10/1998)	Spider-Gtv R.H. DRIVE	41	2	
3 (10/1998)	Spider-Gtv R.H. DRIVE	50	Index	
3 (10/1998)	Spider-Gtv R.H. DRIVE	50	1	
3 (10/1998)	Spider-Gtv R.H. DRIVE	50		15 to 20
3 (10/1998)	Spider-Gtv R.H. DRIVE	55	Index	
3 (10/1998)	Spider-Gtv R.H. DRIVE	55	2	
3 (10/1998)	Spider-Gtv R.H. DRIVE	55		2/1 to 2/2
1 (4/1997)	Spider-Gtv R.H. DRIVE	55	3	
2 (10/1997)	Spider-Gtv R.H. DRIVE	55	Index	
2 (10/1997)	Spider-Gtv R.H. DRIVE	55-2	2 to 3	
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-3	1 to 2	
2 (10/1997)	Spider-Gtv R.H. DRIVE	55-3		3 to 5
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-3		6 to 9
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-8	1 to 2	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-8	3 to 4	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-8		5 to 7
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-8		8 to 10
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-14	1	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-14	2	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-14		2/1
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-14	2/2	
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-14	3	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-14	4	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-14		5
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-14		6
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-19	1	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-19	2 to 4	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-19		5 to 7
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-19		8 to 10
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-20	1	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-20	2 to 4	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-20		5 to 7
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-20		8 to 10
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-26	1	
2 (10/1997)	Spider-Gtv R.H. DRIVE	55-26		2 to 6
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-A1	2 to 4	
1 (4/1997)	Spider-Gtv R.H. DRIVE	55-A3	3 to 4	
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-A3	5 to 45	
3 (10/1998)	Spider-Gtv R.H. DRIVE	55-A3		46 to 72

## **INTRODUCTION**

### **Structure of the Manual**

The present Manual is a supplement to publication "Spider-Gtv - REPAIR INSTRUCTIONS - PA497200000000.

It contains all information specific for versions with RIGHT-HAND DRIVE.

For section here not illustrated, refer to the above mentioned "base manual".

For overhauling engines and mechanical groups refer to the following manuals:

- PA493600000000 REPAIR INSTRUCTIONS - ENGINE OVERHAUL.
- PA494200000000 REPAIR INSTRUCTIONS - OVERHAULING MECHANICAL GROUPS.

In order to facilitate consultation, the structure of the manual mirrors the functional groups already defined for the "Repair Flat-rate Manual" in use by Alfa Romeo Authorized Service Network.

The "Model identification" tables should be consulted before carrying out repair work in order to identify the model of the vehicle, the engine type and the groups which form the vehicle.

### **How to use this manual**

The aim of this manual is to supply the Alfa Romeo Service Personnel with a tool enabling them to rapidly identify faults and to render the corrective interventions precise and efficient.

The manual shows the procedures relative to the removal and refitting and dismantling operations and the checks relative to the various groups forming the vehicle.

The procedures illustrate the complete component disassembly procedures and should only be carried out in their entirety when absolutely unavoidable. The procedures for "assembly" and "refitting" are normally obtained by reversing the procedure followed for "disassembly" or "removal" in reverse and only the reassembly procedures which are significantly different are illustrated.

For information relative to the electrical systems on-board the vehicle refer to section 55 "ELECTRIC SYSTEM" and to the successive "ELECTRIC SYSTEM DIAGNOSIS" which gives the wiring diagrams and the description of each function, the connector tables, the location of the components, the tables for fault diagnosis and the technical data for checking the components.

**All the information given in this manual is accurate at the time of publication.**

**Alfa Romeo reserves the right to make any modifications to its products that it seems necessary without warning. However the technical information and updates to this manual will be supplied as soon as possible.**

**Symbology**

A specific symbology has been used in this manual to permit a rapid identification of the main technical information supplied.

The list of symbols is given below.

	removal/disassembly			exhaust
	refitting/re-assembly			Lubricate only with engine oil
	tighten to the torque			left-hand thread
	caulk nut			torque for tightening in oil
	adjustment/regulation			engine r.p.m.
	visual check			ovalization
	lubricate			taper
	weight difference			eccentricity
	angular value			flatness
	pressure			diameter
	temperature			linear dimension
	brake system air purge			parallelism
	surfaces to be treated			service with grease
	interference			heating temperature
	play			seal
	intake			service with engine oil
				grease
				CAUTION!
				WARNING!

## Warnings for the operator

All the operations must be carried out with the greatest care to prevent damage occurring to the vehicle or persons.

- The use of Alfa Romeo specific tools are indicated for some procedures. These tools must be used to ensure safety and to avoid damaging parts involved in the procedure.
- To free parts which are solidly stuck together, tap with an aluminium or lead mallet if the parts are of metal. Use a wooden or resin mallet for light alloy parts.
- When dismantling ensure parts are marked correctly if required.
- When refitting lubricate the parts, if necessary, to prevent seizing and binding during the initial period of operation.
- Using adhesive paper or clean rags cover those parts of the engine which, following disassembly, present openings which may allow dust or foreign material to enter.
- When refitting, the tightening torques and adjustment data must be respected.
- When substituting the main component(s) the seal rings, oil seals, flexible washers, safety plates, self-locking nuts and all worn parts must also be replaced.
- Avoid marking the internal coverings in the passenger compartment.

**Substitution of groups or disconnected parts must be carried out using original spare parts only. Only in this way can the suitability and perfect operation of each organ be guaranteed.**

- The words **CAUTION** and **WARNING** accompany those procedures where particular care should be taken to prevent damage occurring to people or vehicle parts.



**CAUTION:**  
used when insufficient care could cause damage to people



**WARNING:**  
used when insufficient care could cause damage to the vehicle or its component parts.

- The safety regulations applied to workshops should be respected. Where necessary the manual also lists the specific precautions to be taken to prevent dangerous situations from arising.



**When using chemical products follow the safety indications given on the safety cards which the supplier is obliged to deliver to the user (in Italy in compliance with D.M. n.46/1992).**

### NOTE:

It is possible that for certain subjects were not completed in time for printing. However these subjects are given and highlighted in the indices of the single groups. It is the duty of the Technical Services to supply documentation regarding these subjects as soon as possible through updates or "Technical Bulletins".

**TECHNICAL DATA**

**00**

**INDEX**

**VEHICLE**

- Model identification . . . . . 1
- Location of identification labels . . . . . 1
- Data plate . . . . . 2
- Paint identification label . . . . . 2
- Dimensions (spider) . . . . . 2
- Dimensions (gtv) . . . . . 3
- Weights and loads . . . . . 3
- Wheels and tyres . . . . . 4
- Fluids and lubricants . . . . . 4
- Approximate servicing capacities . . . . . 5

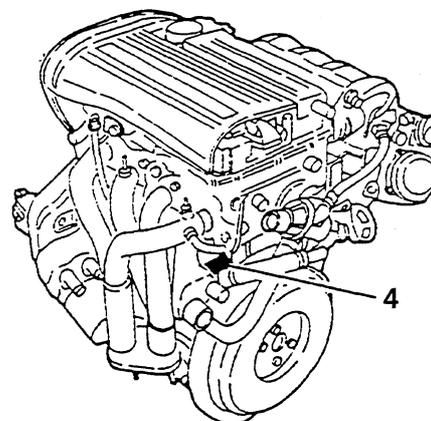
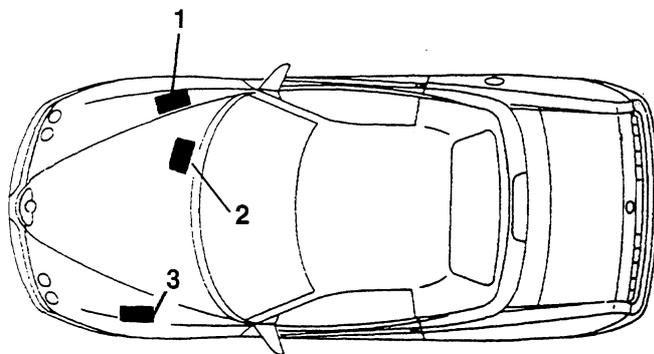
For all information here not listed, see the corresponding section of "Spider-Gtv: Base Manual".

## MODEL IDENTIFICATION

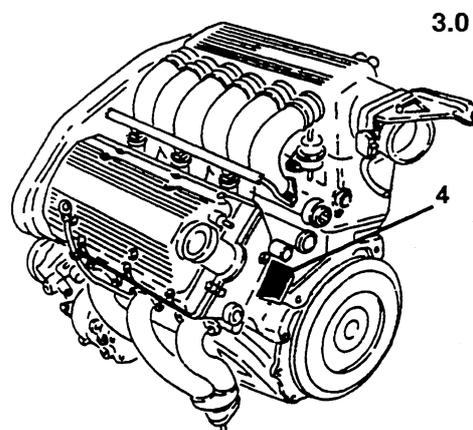
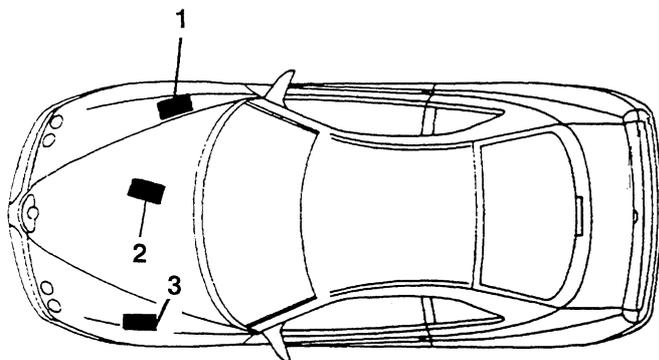
Trade name	Spider T.Spark 16V	GTV T.Spark 16V	GTV 3.0V6 24v
Trim level	Spider	Coupé	Coupé
Version (on identification label)	<b>916S2</b>	<b>916C2</b>	<b>916C1</b>
Chassis (in the engine compartment, on the right-hand shock absorber connection support)	-	-	-
Progressive chassis number	6000001	6000001	6000001
Motor (code)	AR 16201 AR 32301 (•)	AR 16201 AR 32301 (•)	AR 16102
Engine symbol	 T.SPARK 16V	 T.SPARK 16V	 24V
Gearbox (code)	C.510.5.21.17	C.510.5.21.17	C.530.5.31.09 C.530.6.XX.YY (•)

(•) from '98 Version

## LOCATION OF IDENTIFICATION LABELS



T.SPARK



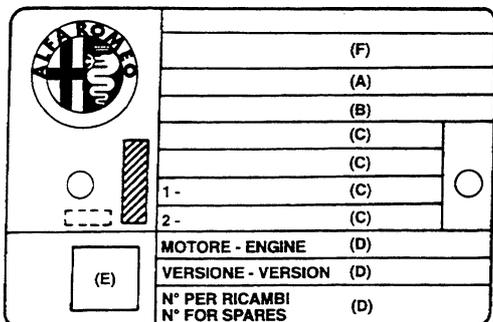
3.0 V6 24V

1. Data plate
2. Body code

3. Paint identification label
4. Engine code

**DATA PLATE**

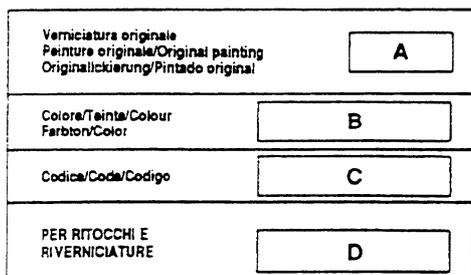
This is located in the engine compartment LH side. It contains the data listed below:



- A. Space reserved for details of national homologation
- B. Space for punching progressive chassis number
- C. Space available for maximum weights authorised by different national regulations
- D. Space reserved for version (for example 916C2A) and any additional information
- E. Space reserved for smoke opacity index
- F. Space reserved for punching manufacturer's name

**PAINT IDENTIFICATION LABEL**

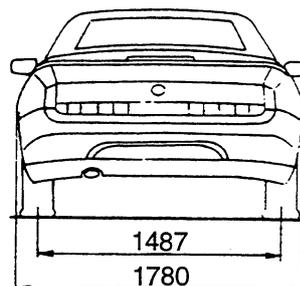
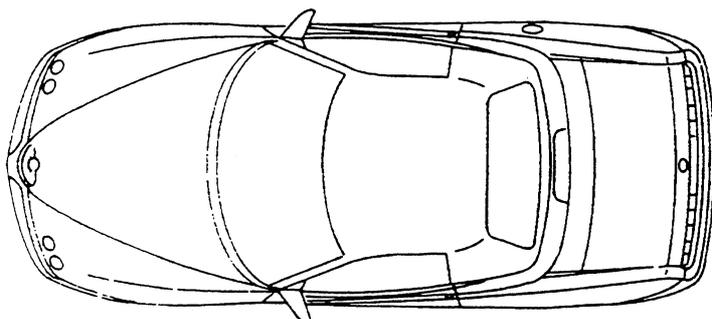
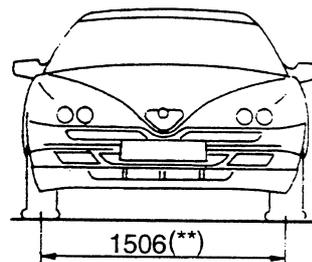
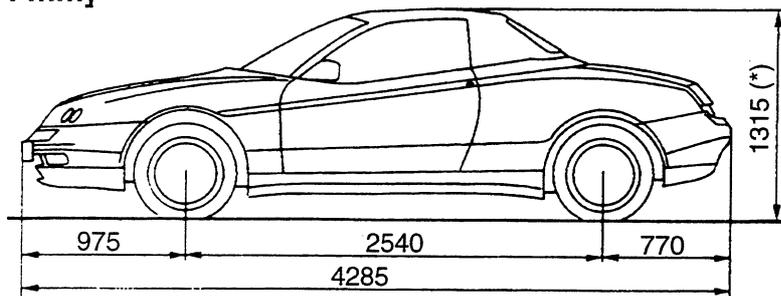
This is located on the inner part of the bonnet and carries the data given below:



- A. Paint manufacturer
- B. Colour name
- C. Colour code
- D. Colour code for touch-up and respray

**DIMENSIONS (Spider)**

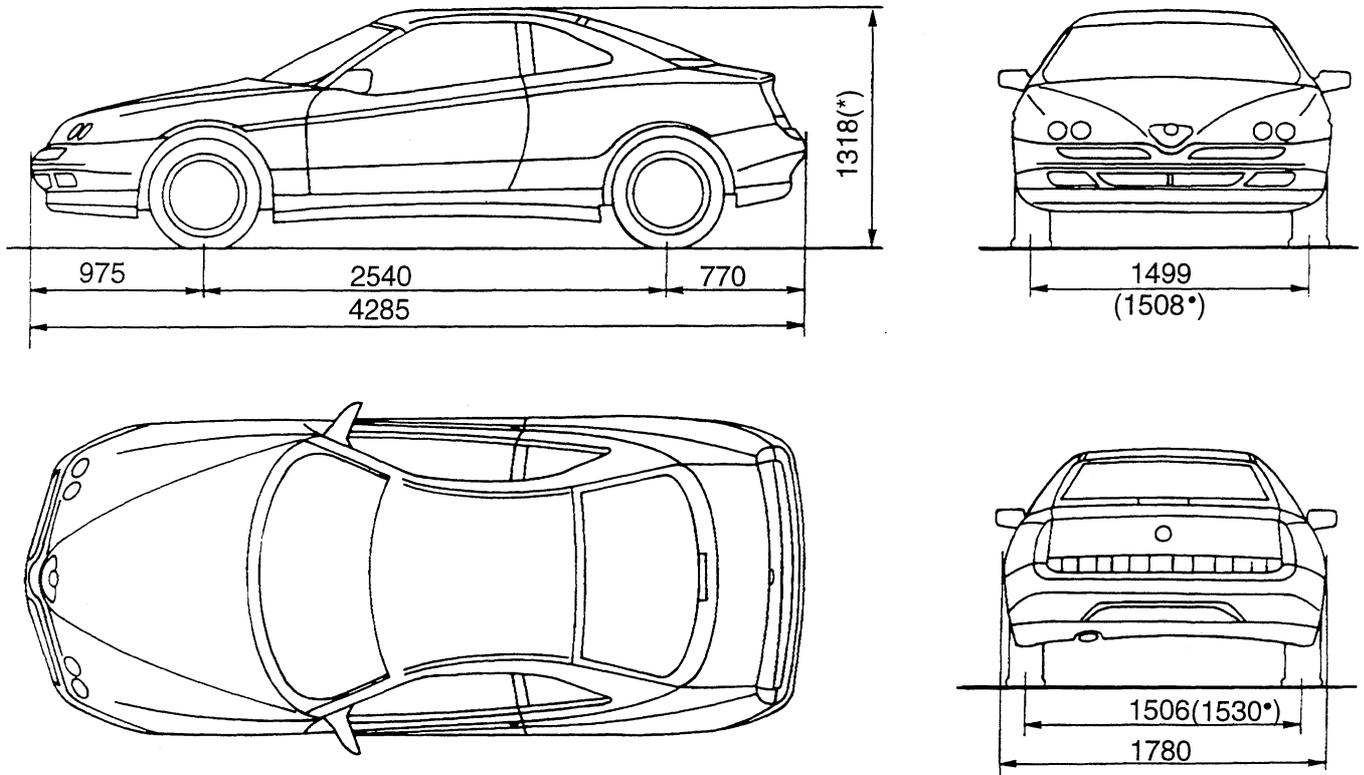
[Unit : mm]



(\*) Empty vehicle  
(\*\*) With alloy rims

## DIMENSIONS (Gtv)

[Unit: mm]



(\*): Empty vehicle

(•): for 3.0V624v only

## WEIGHTS AND LOADS

Unit: kg

Characteristics		Versions		
		916S2	916C2	916C1
Kerb weight (without driver)		1370	1370	1415
Maximum allowed weight		1630	1780	1820
Useful load		260	440	405
Max. permissible weight per axle	front	974	974	1060
	rear	800	870	870
Towable weight	with braked trailer	1000	1000	1000
	with trailer without brakes	500	500	500
Maximum load on tow hook		50	50	50

## WHEELS AND TYRES

Versions	RIM-TYRE SIZE	PRESSURES (bar)	
		FRONT	REAR
916S2	6J x 15" (steel) - 195/60 ZR15" 195/60 R15 88W (•)	2.3	2.1
	6.5J x 16" (alloy) - 205/50 ZR16" 205/50 R16 87Y (•)	2.7	2.5
916C2	6J x 15" (steel) - 195/60 ZR15" 205/50 R16 87Y (•)	2.3	2.1
	6.5J x 16" (alloy) - 205/50 ZR16" 205/50 R16 87Y (•)	2.7	2.5
916C1	6.5J x 16" (alloy) - 205/50 R16 87W 205/50 R16 87Y (•)	2.7	2.5
916 S2-C2	COMPACT SPARE WHEEL 4J x 15" - T125/80 R15 96M	4.2	
916 C1	COMPACT SPARE WHEEL 4J x 16" - T125/80 R15 97M	4.2	

(•) from '98 Version

### WARNING:

In the event of continuous driving at top speed, the pressures should be increased by 0.3 bar.

## FLUIDS AND LUBRICANTS

Type	Group ref.	Application		Classification	Name
OIL	10 - Engine	Engine (Refilling)		API SJ CCMCG5 ACEA A3-96 SAE 10W/40	SELENIA 20K SAE 10W/40(*)
	21 - Gearbox	Gearbox - differential (Refilling)		SAE75W90 API GL-5	TUTELA ZC 75 SYNTH
	50 - Auxiliary organs	T.SPARK	Compressor (Refilling)	-	
30V624v		SANDEN SP 10 "PAG"			
FLUID	10 - Engine	Cooling circuit (Refilling)		-	ALFA ROMEO CLIMA FLUID SUPER PERMANENT - 40°C
	18 - Clutch	Brake - clutch hydraulic circuit (Refilling)	-	DOT 4 SAE J 1703 F	ALFA ROMEO BRAKE FLUID SUPER DOT 4
	33 - Brakes				

(\*): For decidedly sportive use of the car wholly synthetic **SELENIA Racing 10W/60** engine oil is recommended.

**FLUIDS AND LUBRICANTS (continues)**

Type	Group ref.	Application	Classification	Name
FLUID	41 - Steering	Power steering system (Refilling)	G.M. DEXRON II	TUTELA GI/A
	50 - Auxiliary organs	Air conditioning circuit (Refilling)	-	RIVOIRA: SUVA R134a HOECHST - TAZZETTI: FRIGEN R134a ICI - TAZZETTI: KLEA R134a

**APPROXIMATE SERVICING CAPACITIES**

Capacity		Versions	916S2	916C1
			916C2	
Fuel tank			70 litres	
Fuel reserve			~ 9 litres	
Engine oil	Sump + filter (for periodical replacement)		4.4 litres	6 litres
Gearbox - differential oil			2 litres	
Power steering system oil			1.3 kg	
Brake and clutch circuit oil			0.4 kg	
Engine cooling system fluid			8.4 litres	11.7 litres
Conditioner compressor oil			290 ± 30 cm <sup>3</sup>	240 ± 10 cm <sup>3</sup>
Conditioning system fluid			0.650 kg + 0.05 kg	

**ENGINE****10****INDEX****AIR INTAKE CIRCUIT (up to '97 version)**

- Intake Box..... 1
- Removal/refitting..... 1

**ACCELERATOR CONTROL (up to '97 version)**

- Accelerator pedal..... 5
- Removal/refitting..... 5
- Accelerator cable..... 5
- Replacement..... 5
- Adjustment..... 6

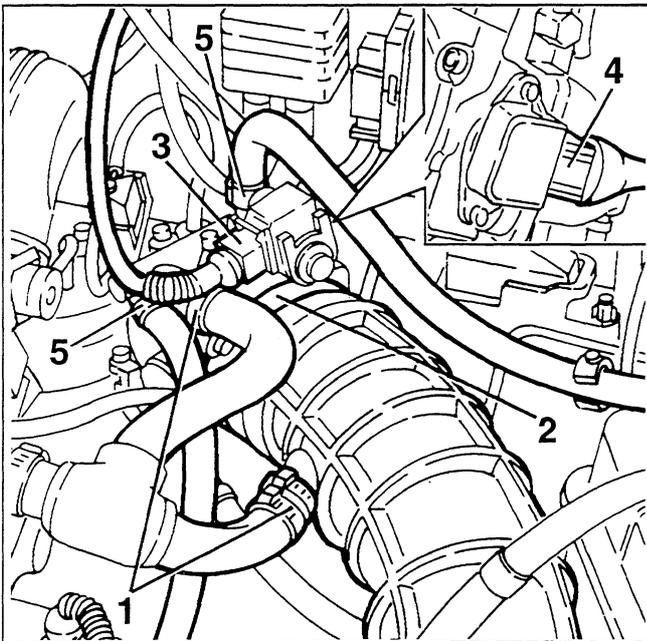
For all information here not listed, see the corresponding section of "Spider-Gtv: Base Manual".

## AIR INTAKE CIRCUIT (up to '97 version)

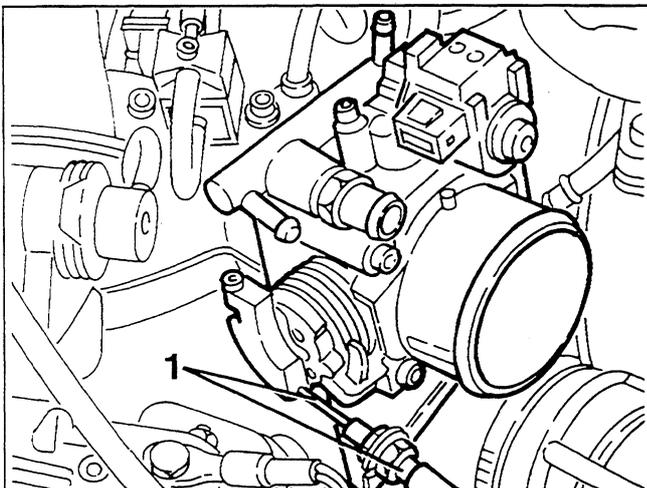
### INTAKE BOX

#### REMOVAL/REFITTING

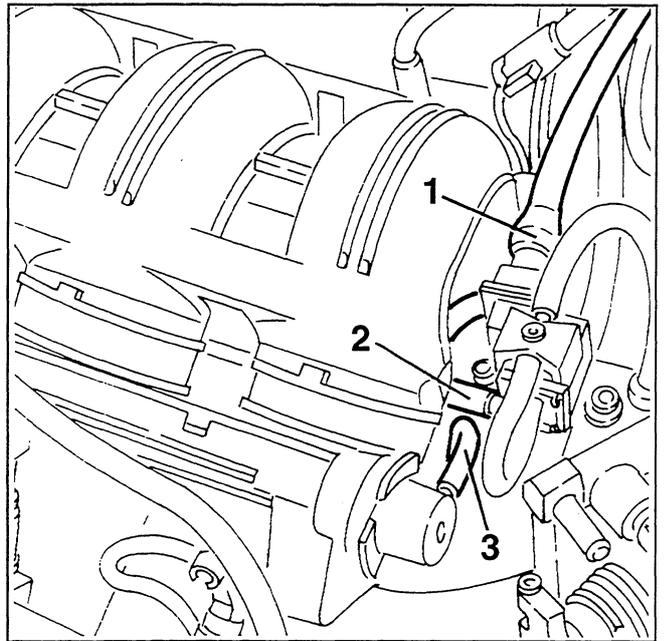
- Set the car on a lift.
- Disconnect the battery (-) terminal.
- 1. Disconnect the oil vapour recirculation pipe from the throttle body and from the corrugated sleeve.
- 2. Slacken the fastening clamp and disconnect the corrugated sleeve from the throttle body.
- 3. Disconnect the electrical connection from the constant idle speed actuator.
- 4. Disconnect the electrical connection from the throttle potentiometer.
- 5. Disconnect the two engine coolant fluid inlet and outlet pipes from the throttle body.



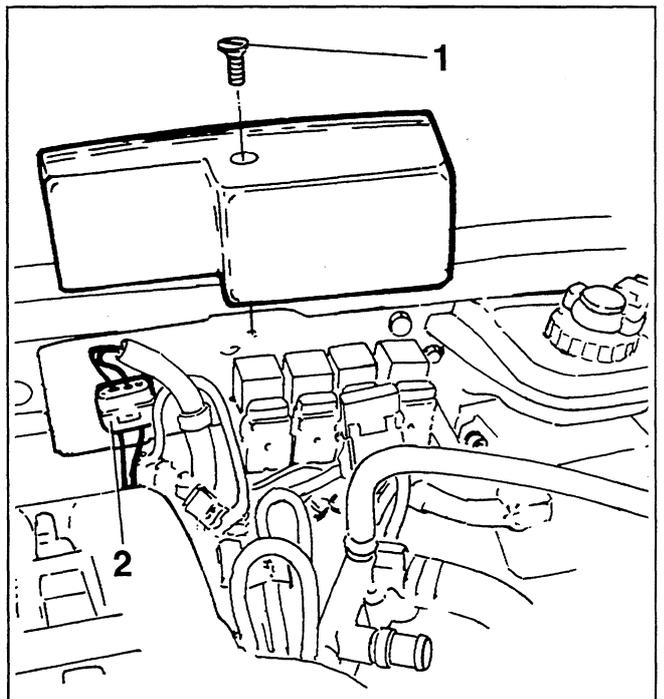
1. Disconnect the accelerator cable from the throttle.



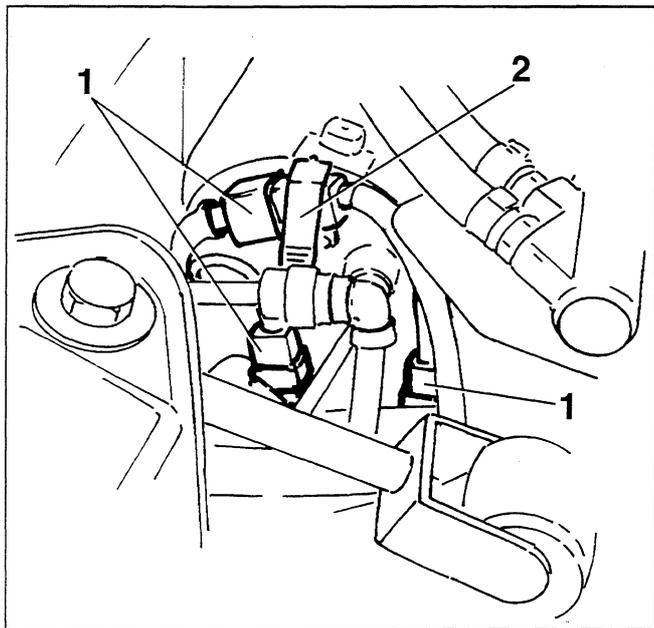
1. Disconnect the electrical connection from the E.G.R. modulation solenoid valve.
2. Disconnect the connection pipe to the E.G.R. valve from the modulation solenoid valve.
3. Disconnect the fuel pressure regulator vacuum takeoff pipe.



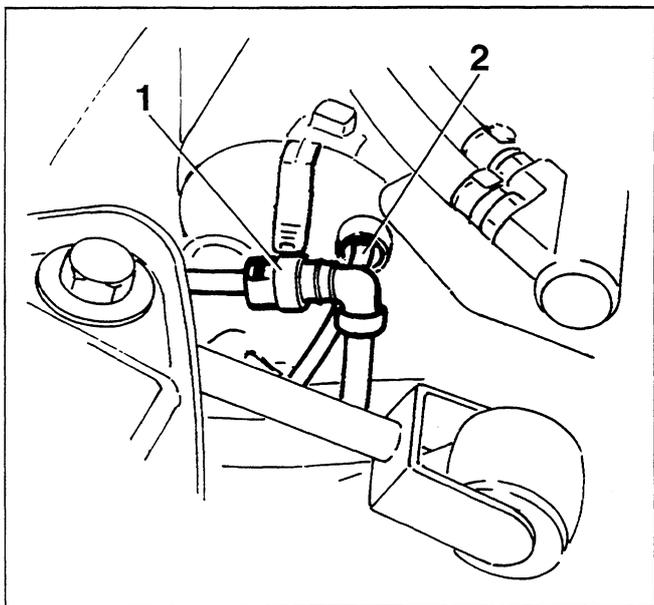
1. Slacken the screw and remove the relay unit cover.
2. Disconnect the lambda probe connection.



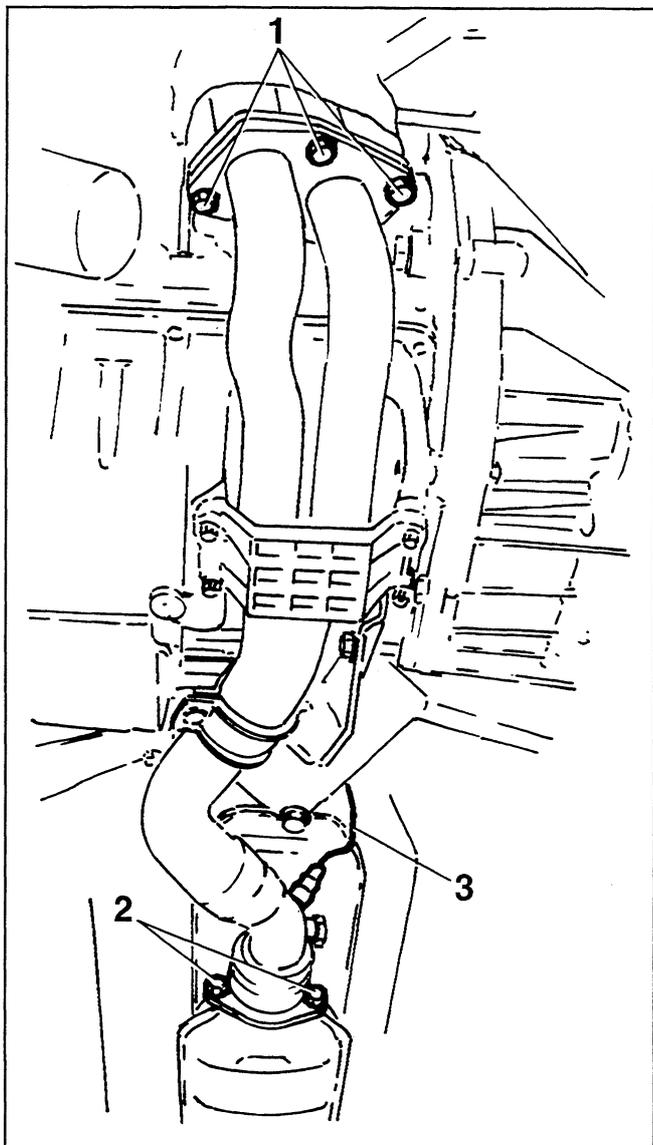
1. Disconnect the three electrical connections.
2. Prise off the connectors fastened to the intake box.



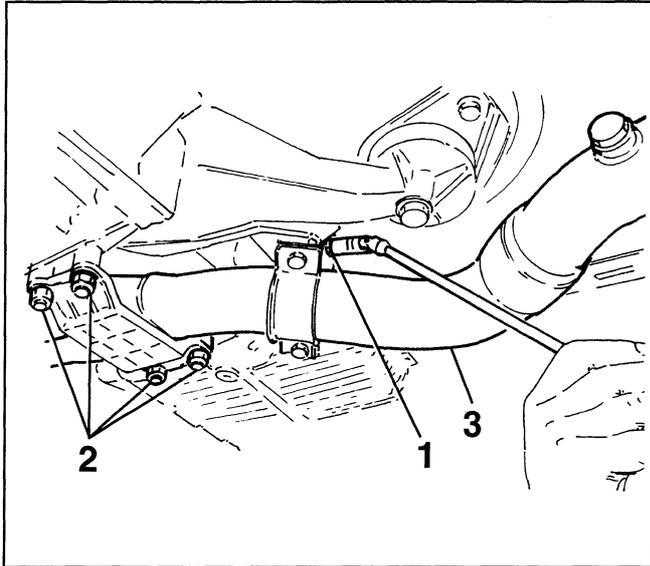
1. Disconnect the servobrake vacuum pipe union (press the tabs on the union).
2. Disconnect the fuel vapour recirculation pipe from the intake box.



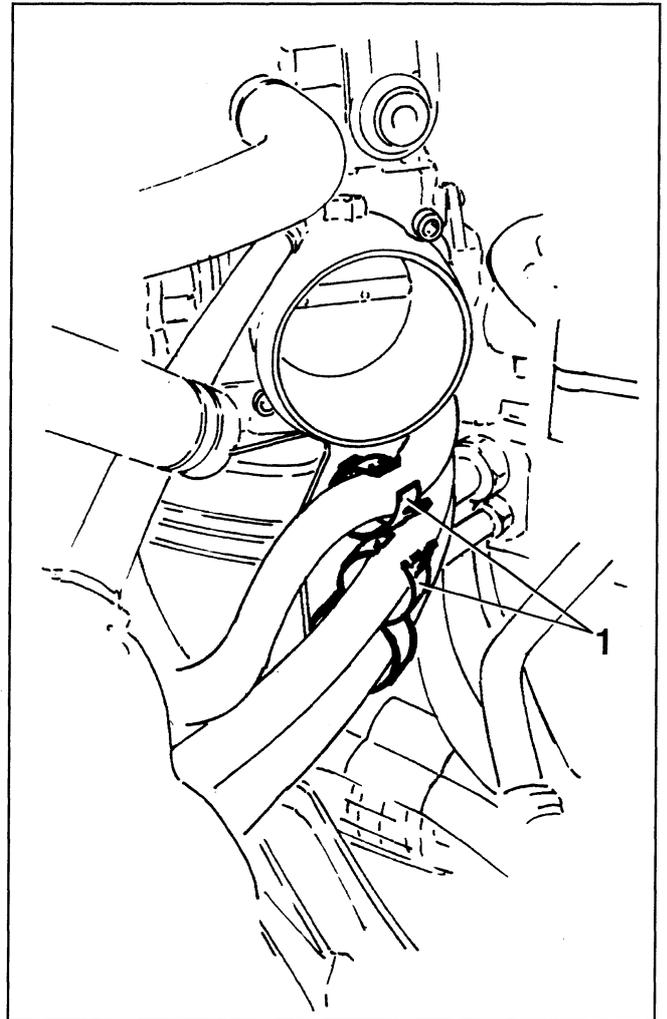
- Raise the vehicle.
1. Slacken the four screws of the front exhaust pipe.
  2. Slacken the two rear bolts.
  3. Withdraw the lambda probe cable.



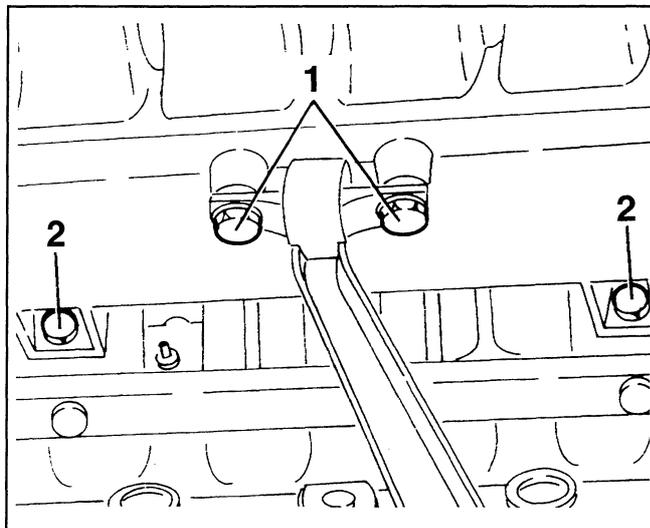
1. Slacken the intermediate support bolt.
2. Slacken the four nuts fastening the reinforcement bracket.
3. Withdraw the exhaust pipe.



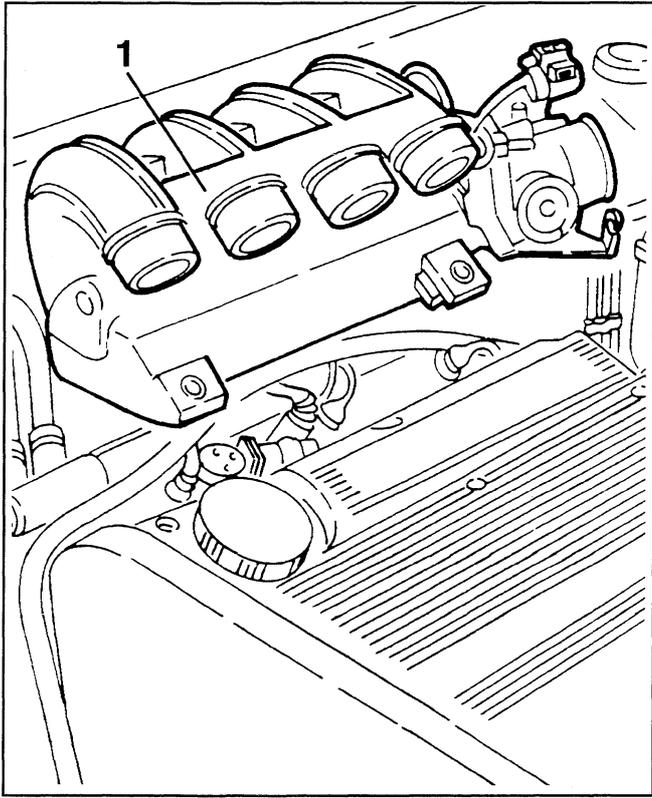
- Lower the vehicle.
1. Open the support brackets and free the pipes and cable.



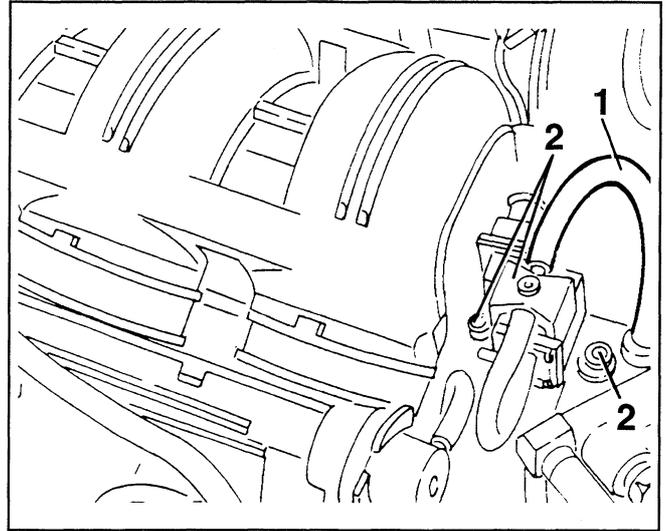
1. Slacken the two screws fastening the support to the intake box.
2. Slacken the two screws fastening the intake box to the cylinder head.



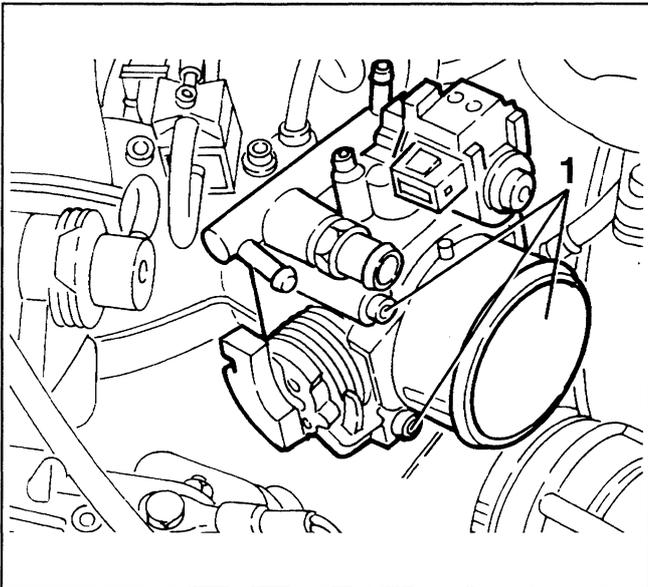
1. Slacken the fastening clamps and withdraw the complete intake box upwards.



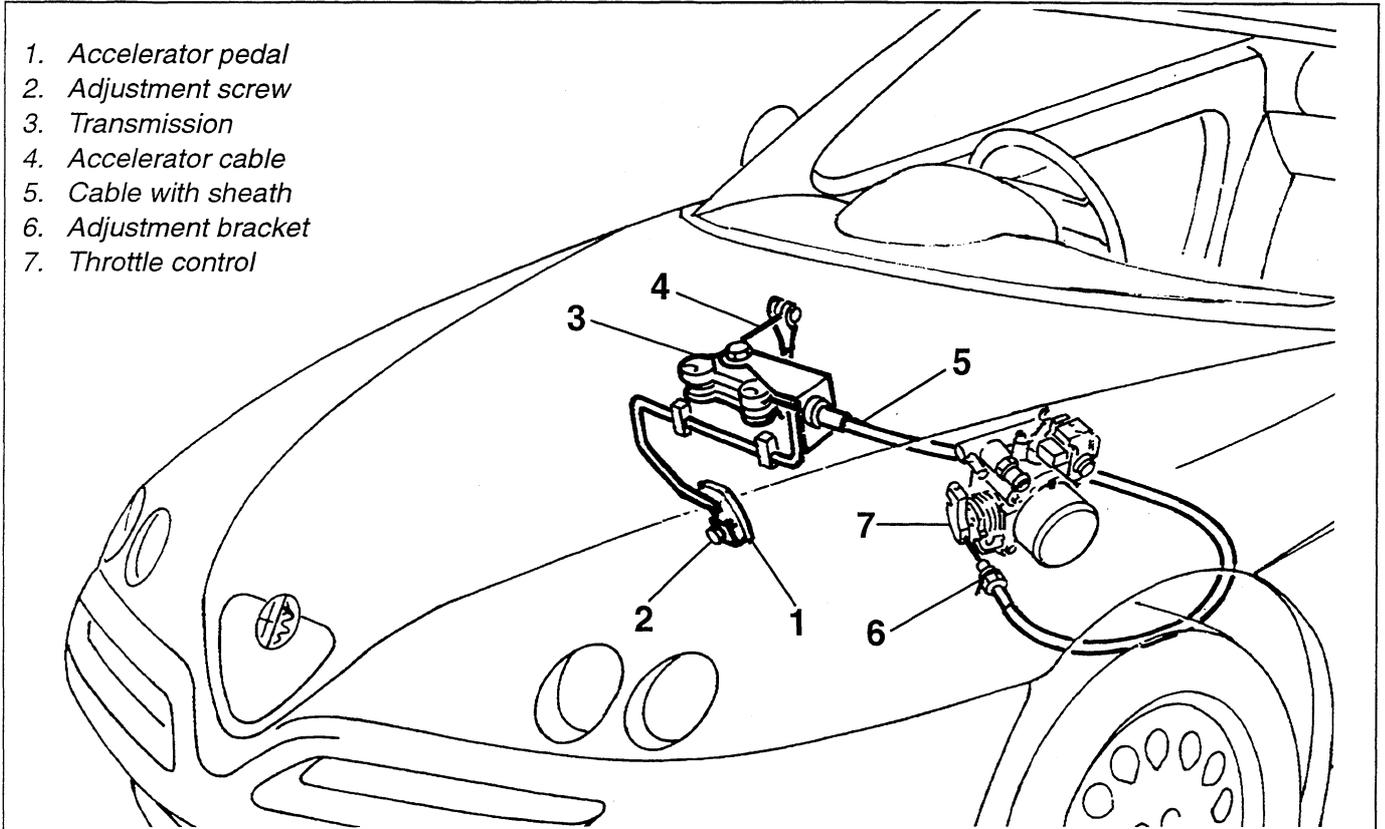
1. If necessary, disconnect the E.G.R. modulating solenoid valve piping from the box.
2. Slacken the two screws and remove the solenoid valve.



1. If necessary, slacken the four fastening screws and remove the throttle body.



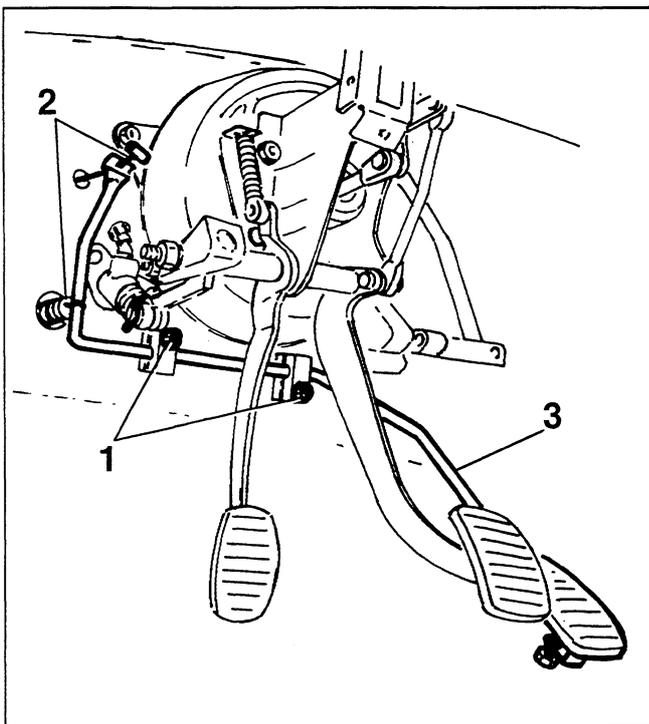
## ACCELERATOR CONTROL (up to '97 version)



### ACCELERATOR PEDAL

#### REMOVAL/REFITTING

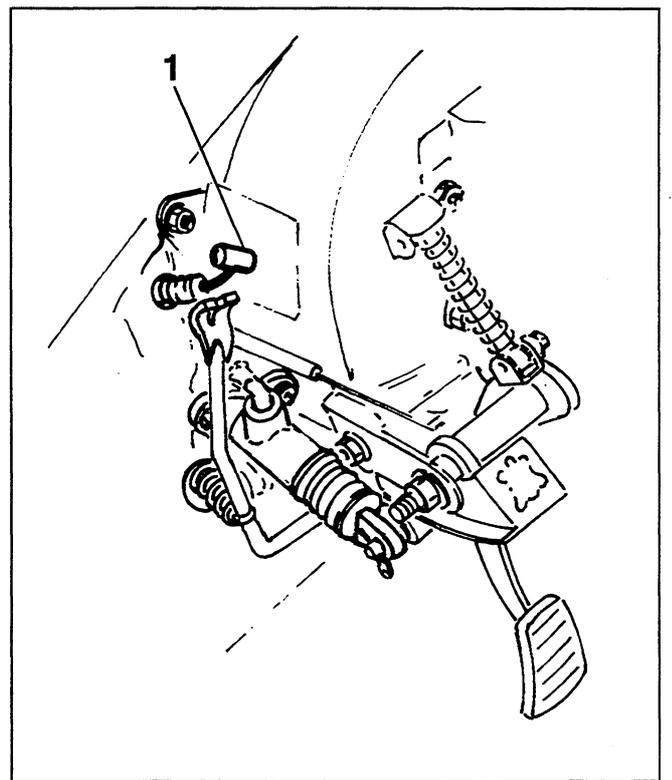
1. Working from the passenger compartment, slacken the two nuts fastening the pedal.
2. Release the pedal fork from the cable and spring.
3. Retrieve the accelerator pedal.



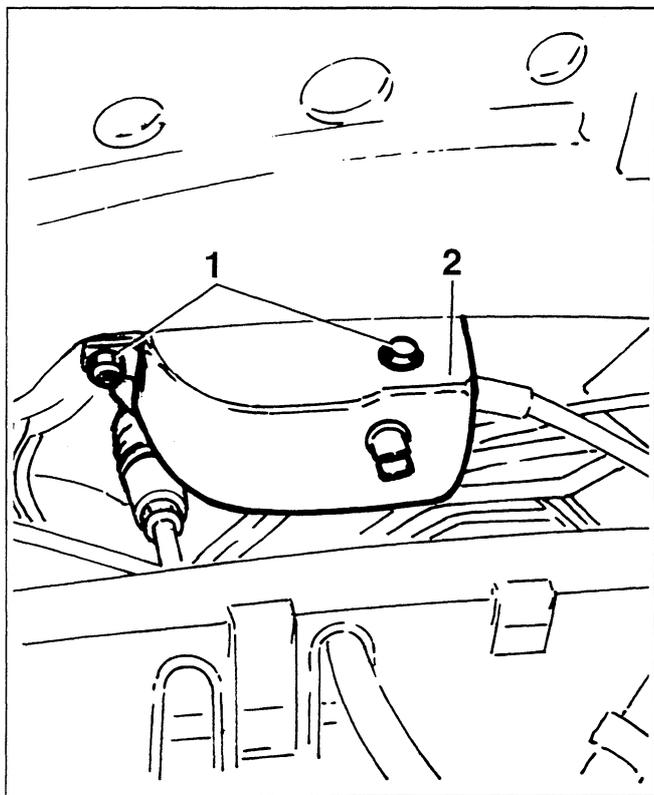
### ACCELERATOR CABLE

#### REPLACEMENT

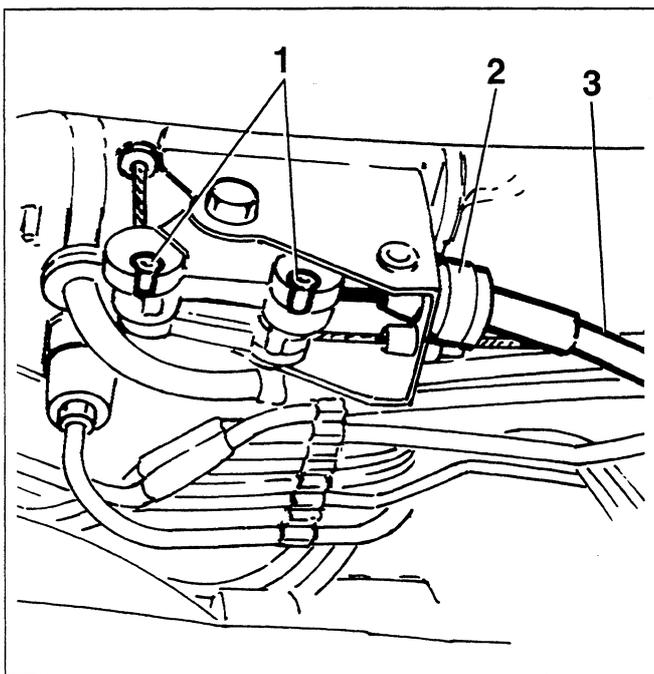
1. Working from the passenger compartment, release the fork controlled by the pedal.



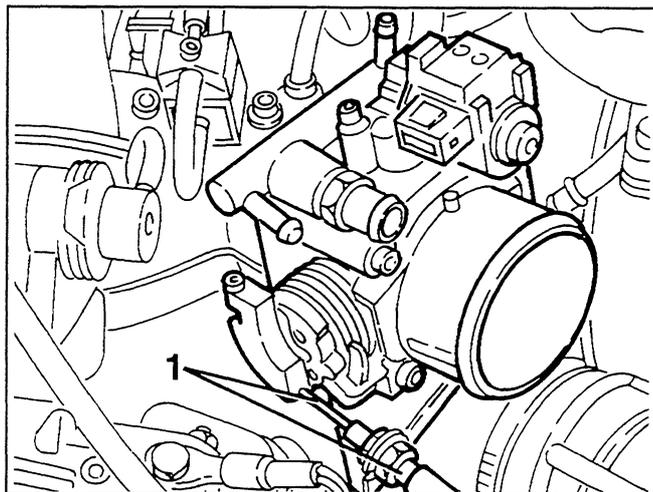
- Remove the intake box (see specific paragraph).
- 1. Working in the engine compartment, slacken the screw and nut fastening the transmission cover.
- 2. Remove the cover.



- 1. Free the accelerator cable pawls.
- 2. Free the sheath from the bracket.
- 3. Retrieve the sheath complete with cable.

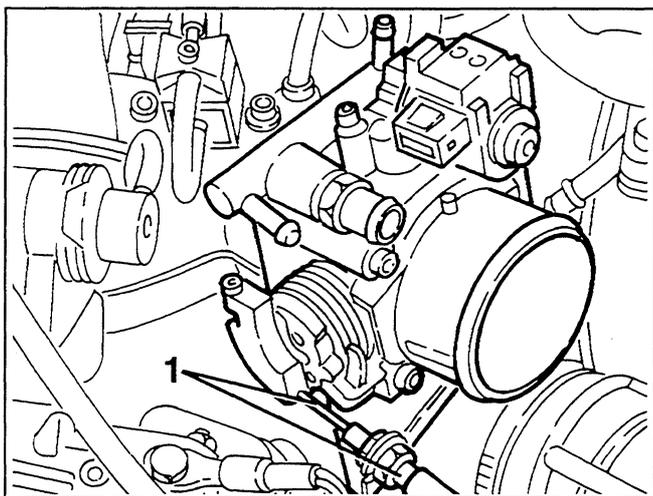


- 1. Disconnect the accelerator cable from the throttle. When refitting the cable adjust the accelerator control.

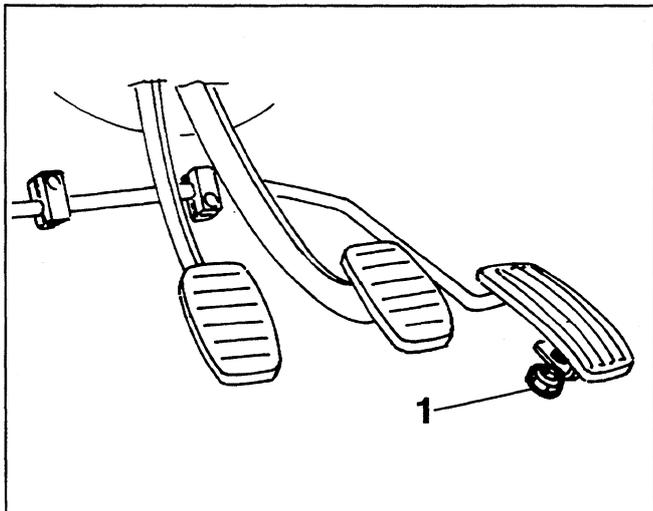


**ADJUSTMENT**

- Check that when the pedal is not pressed the throttle contacts against the stopper of idle speed.
- 1. If not, work on the adjustment nuts of the sheath on the throttle body bracket.



- Check that when the pedal is depressed completely, the throttle reaches its contact against the maximum stop, without excessively tauting the cable.
- 1. If not, work on the stop screw under the accelerator pedal.



**CLUTCH**

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**INDEX**

**CLUTCH CONTROL**

- Clutch pump ..... 1
- Removal/refitting ..... 1
- Clutch pedal ..... 1
- Removal/refitting ..... 1

For all information here not listed, see the corresponding section of "Spider-Gtv: Base Manual".

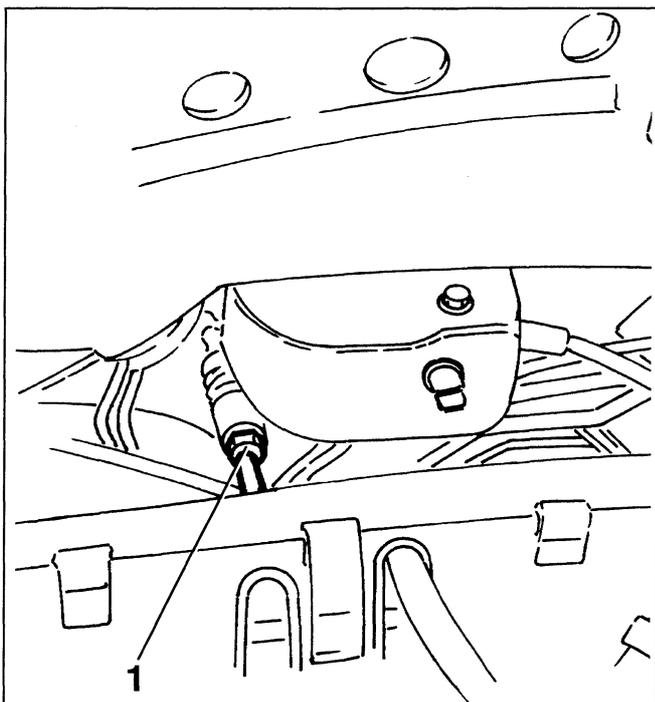
## CLUTCH CONTROL

### CLUTCH PUMP

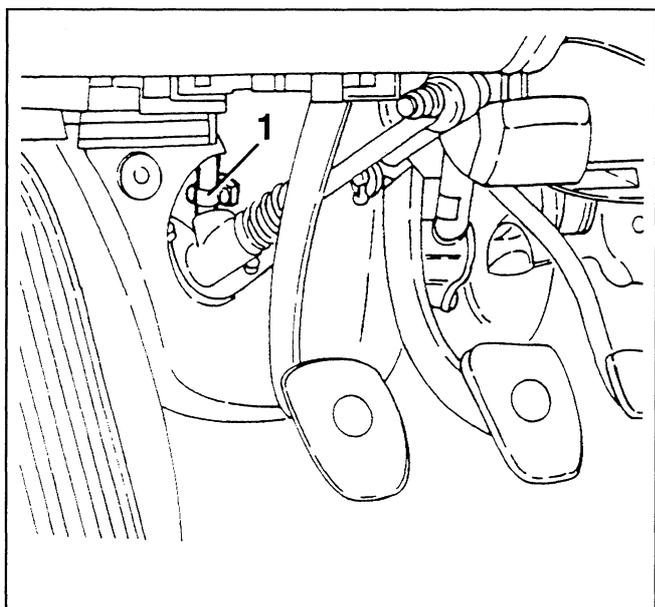
#### REMOVAL/REFITTING

- Drain the brake-clutch fluid reservoir using a suitable syringe.
- Remove the intake box (see Group 10, specific paragraph).

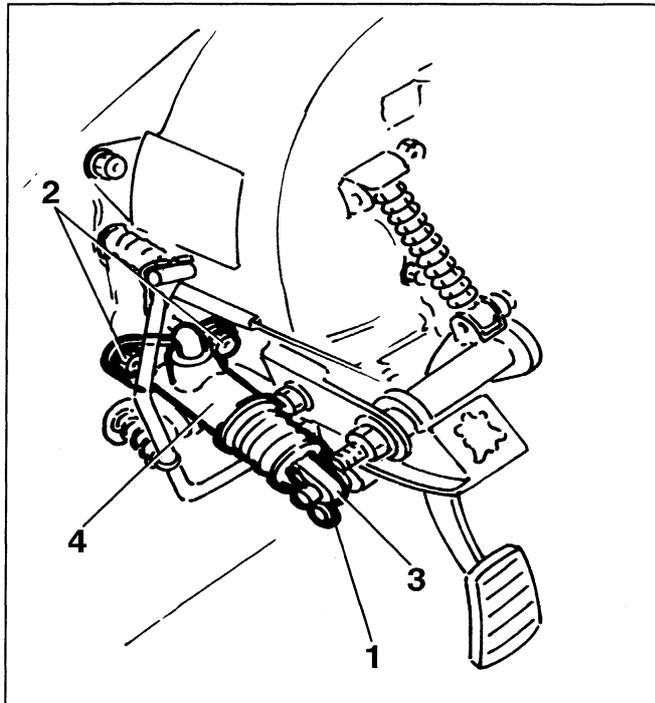
1. Working from the engine compartment, remove the clutch pump fitting.



1. Working from the passenger compartment, disconnect the reservoir connection pipe from the reservoir.



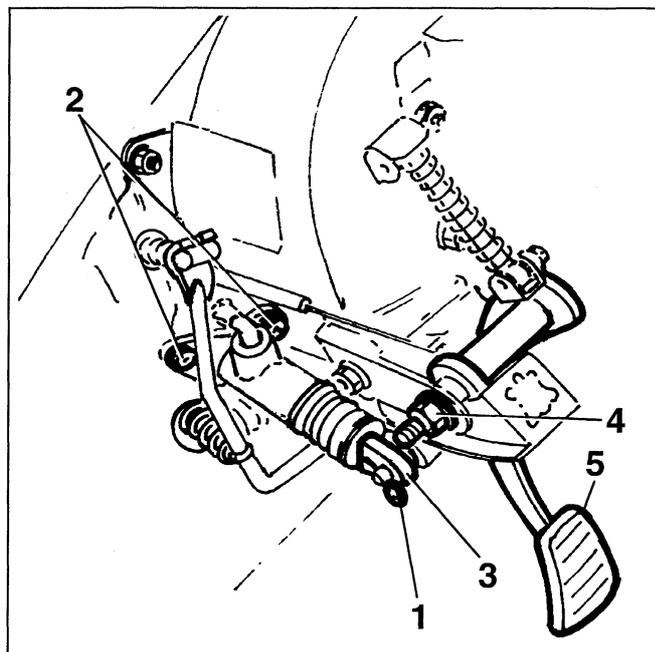
1. Remove the split pin.
2. Slacken the two nuts fastening the clutch pump.
3. Free the pump drive shaft.
4. Retrieve the clutch pump.



### CLUTCH PEDAL

#### REMOVAL/REFITTING

1. Remove the split pin.
2. Slacken the two nuts fastening the clutch pump.
3. Free the pump drive shaft.
4. Slacken and withdraw the pedal fastening bolt.
5. Retrieve the clutch pedal.



**BRAKE HYDRAULIC CYRCUIT**

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**INDEX**

**BRAKE HYDRAULIC CYRCUIT**

- Brake pedal .....	1
- Removal/refitting .....	1
- Brake pump .....	1
- Removal/refitting .....	1
- Servobrake .....	2
- Removal/refitting .....	2

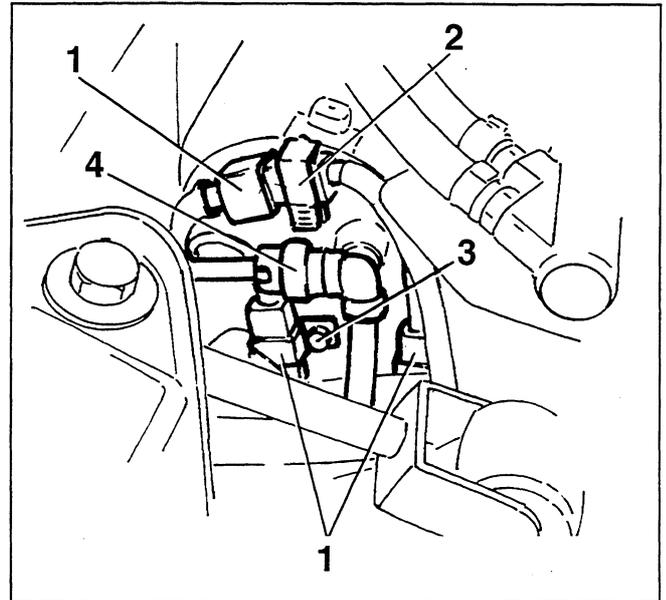
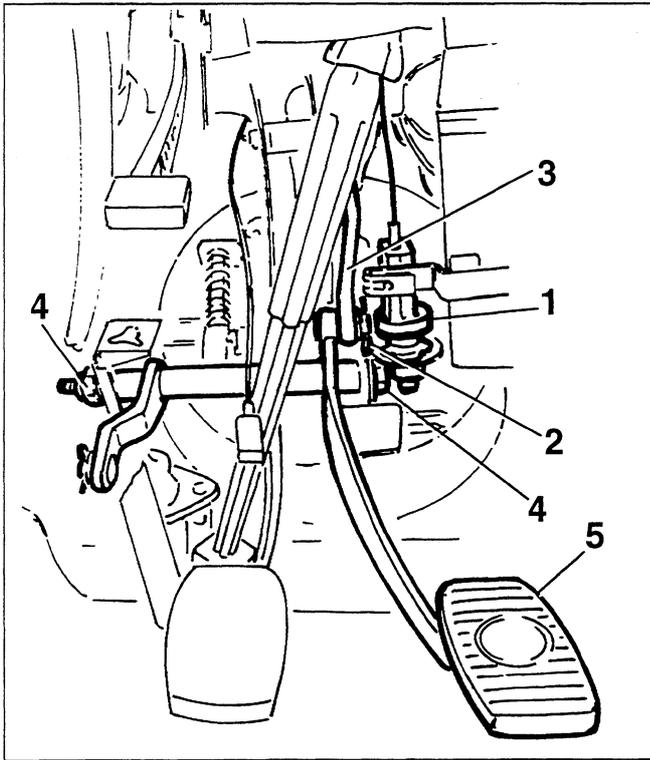
For all information here not listed, see the corresponding section of "Spider-Gtv: Base Manual".

## BRAKE HYDRAULIC CYRCUIT

### BRAKE PEDAL

#### REMOVAL/REFITTING

1. Turn and remove the brake light switch from its housing.
2. Remove the split pin.
3. Withdraw the connecting rod from the pin on the brake pedal.
4. Slacken and remove the pedal fastening bolt.
5. Retrieve the brake pedal.

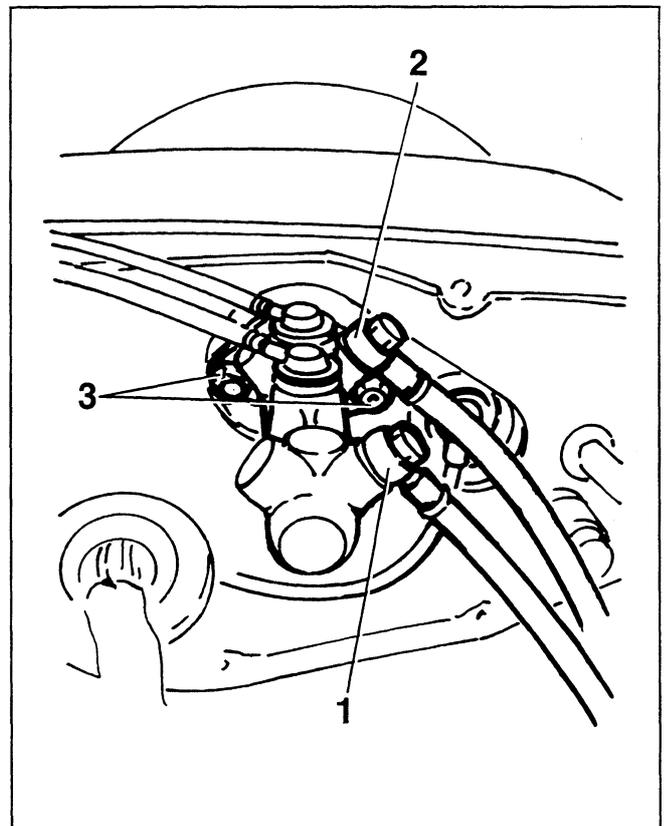


1. Slacken the front fitting on the brake pump.
2. Slacken the rear fitting.
3. Slacken the two pump fastening nuts.

### BRAKE PUMP

#### REMOVAL/REFITTING

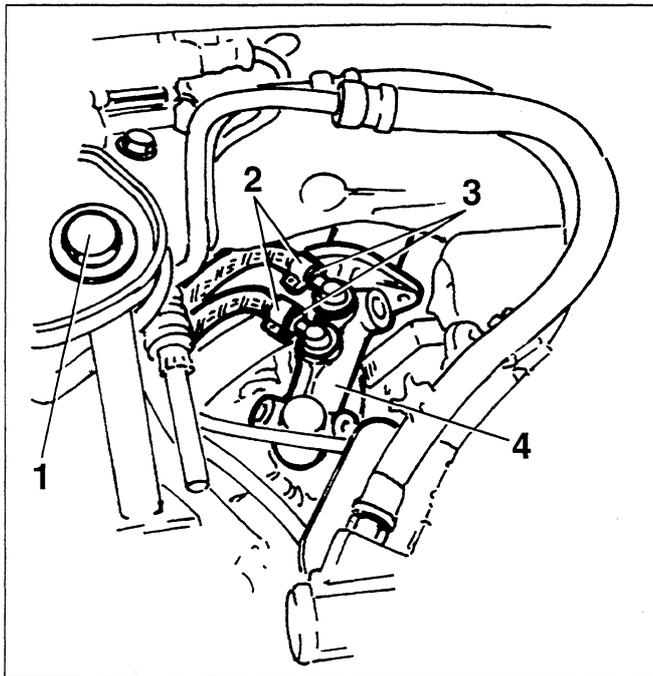
- Drain the brake-clutch fluid reservoir, using a suitable syringe.
1. Disconnect the three electrical connections on the side of the intake box.
  2. Prise the connectors opening the plastic clamps.
  3. Slacken the screw and remove the rear clamp.
  4. Disconnect the vacuum pipe fitting for the servo-brake (press the tabs on the fitting).



1. To facilitate removal of the pump, slacken the engine mount connecting rod stay bolt and move the engine slightly forwards by levering.
  - Move the pump forwards keeping it in line with the servobrake.
2. Remove the clamps.
3. Withdraw the reservoir connection hoses.
4. Retrieve the brake pump.



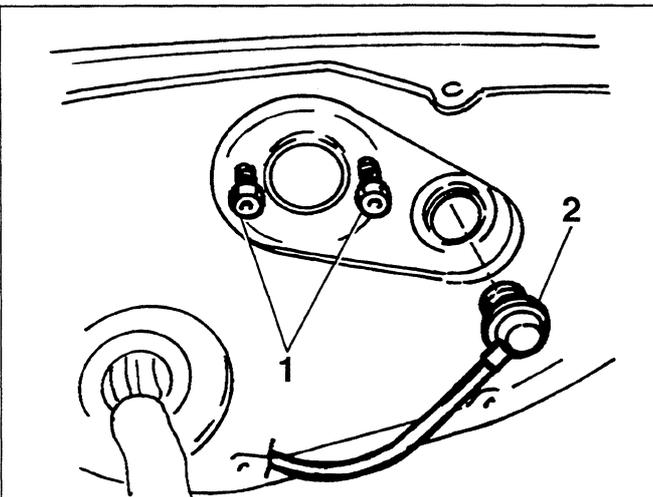
When refitting relieve the air from the system.  
After this, top up the brake-clutch fluid in the reservoir to the correct level.



## SERVOBRAKE

### REMOVAL/REFITTING

- Remove the brake pump (see specific paragraph).
1. Re-tighten the nuts on the brake pump threaded stay pins.
  2. Disconnect the vacuum pipe from the servobrake.



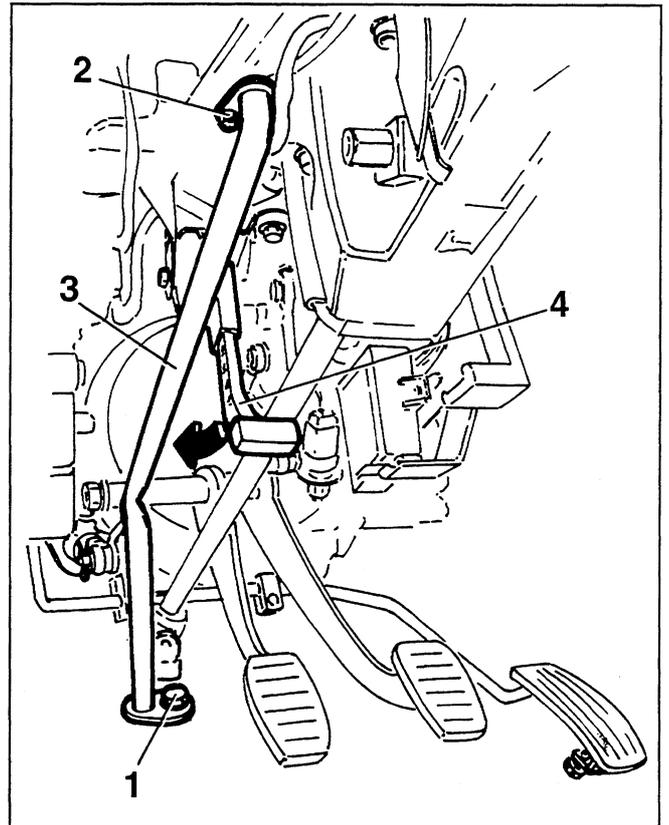
Then, working from the passenger compartment, remove the dashboard (see Group 70 - Base Manual).

**(Up to '97 version only)**

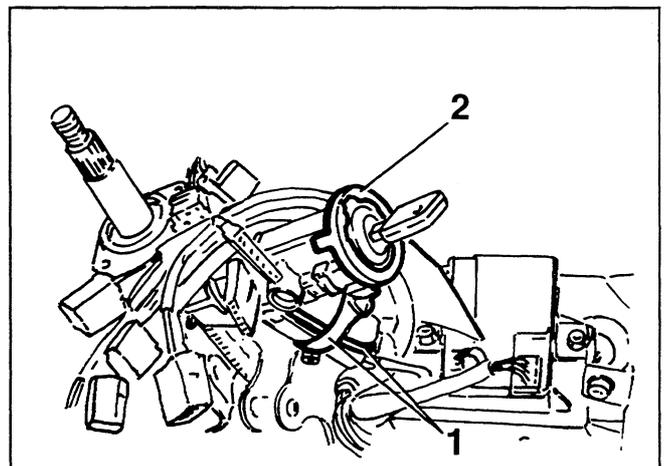
1. Slacken the lower screw of the reaction strut.
2. Slacken the two upper screws.
3. Remove the reaction strut.

**(from '98 version)**

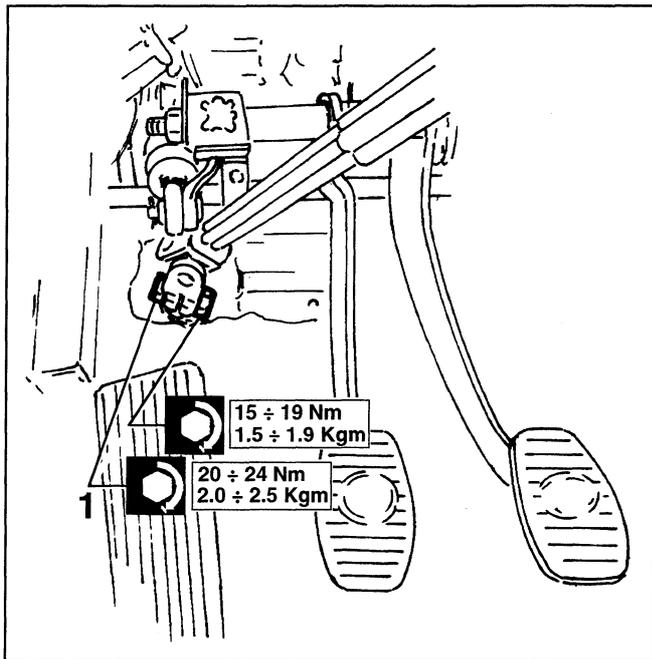
- Remove the steering column cross member.
4. Push the bonnet opening lever down and release it.



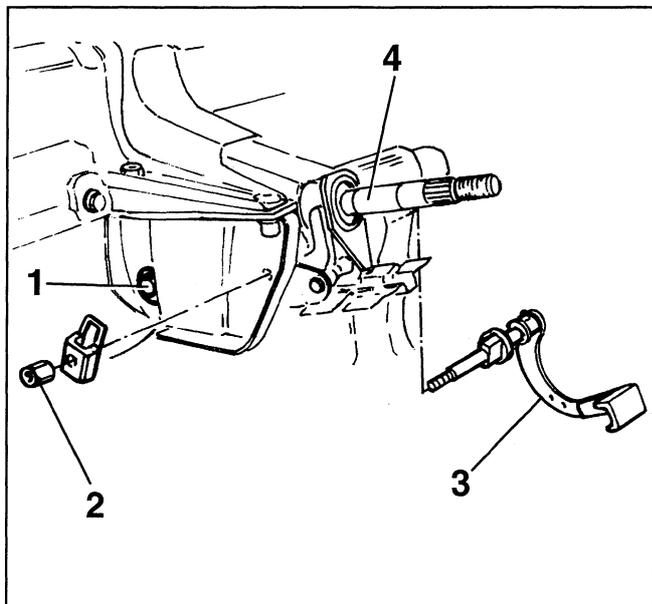
1. Remove the clamps and disconnect the ignition switch connector.
2. Withdraw the ALFA ROMEO CODE system aerial without disconnecting it.



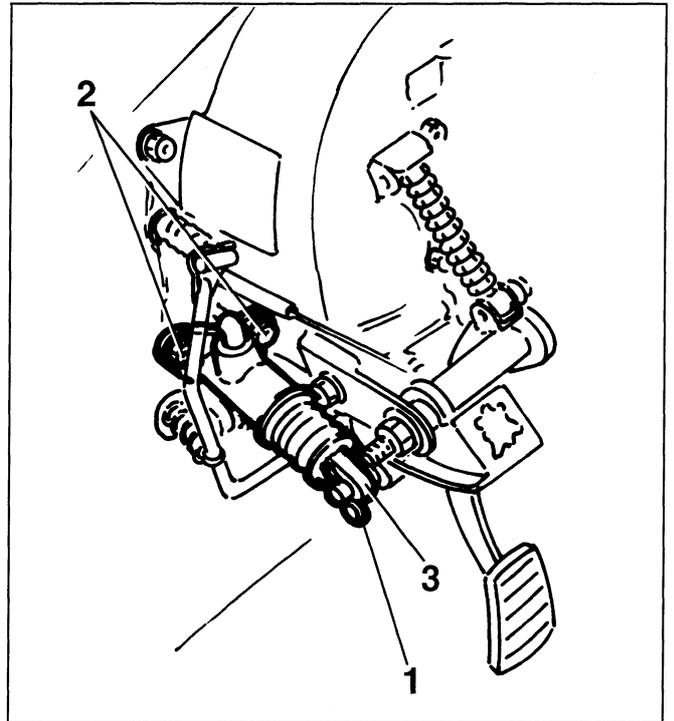
1. Slacken the bolt fastening the lower cardan joint to the steering box shaft.



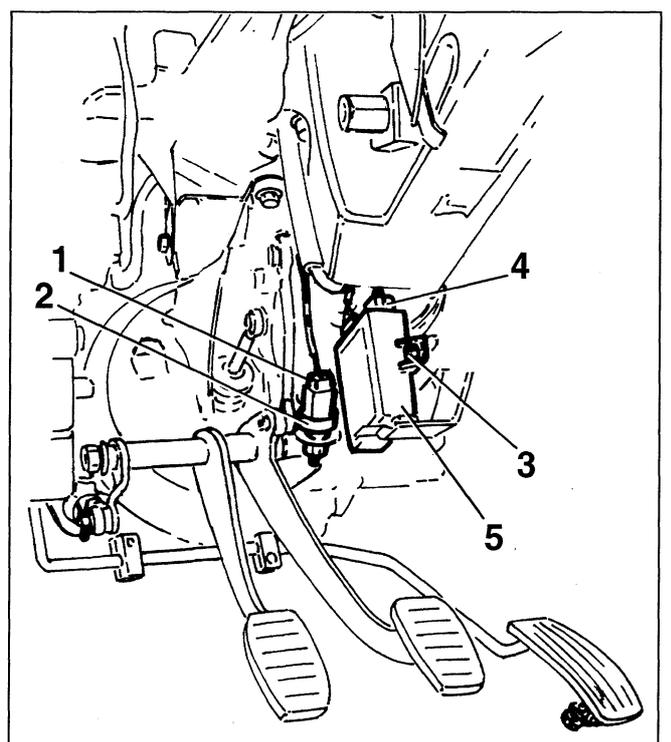
1. Slacken the steering column front connection bolt.
2. Remove the steering column adjustment lever bolt.
3. Remove the steering column adjustment lever retrieving the washers and spacers.
4. Remove the steering column.



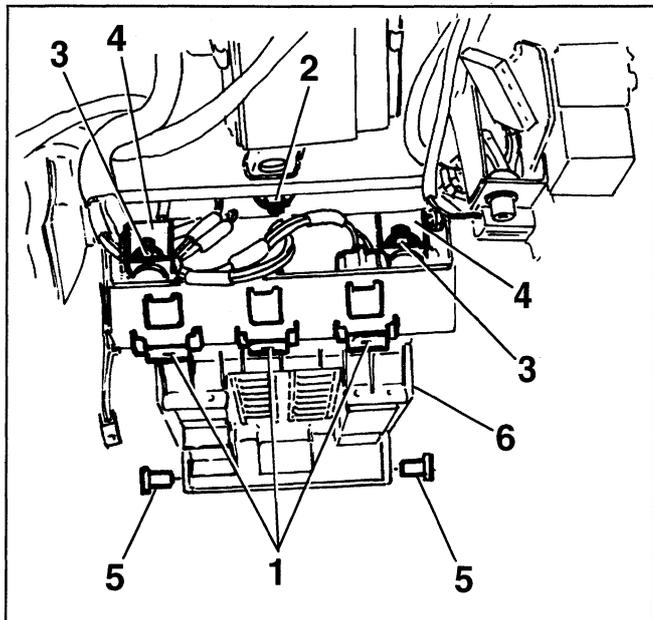
1. Withdraw the split pin and retrieve the washer.
2. Slacken the clutch pump fastening nuts.
3. Free the clutch pump spindle from the pin connected to the pedal.



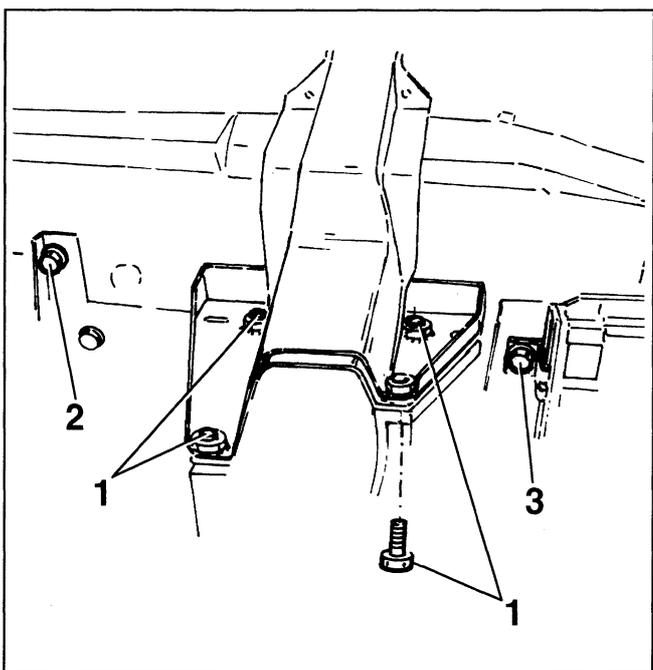
1. Disconnect the brake light switch electrical connection.
2. Turn the switch 45° clockwise and remove it.
3. Slacken the two nuts of the Alfa Romeo Code control unit.
4. Lower the control unit and disconnect the electrical connections.
5. Retrieve the control unit.



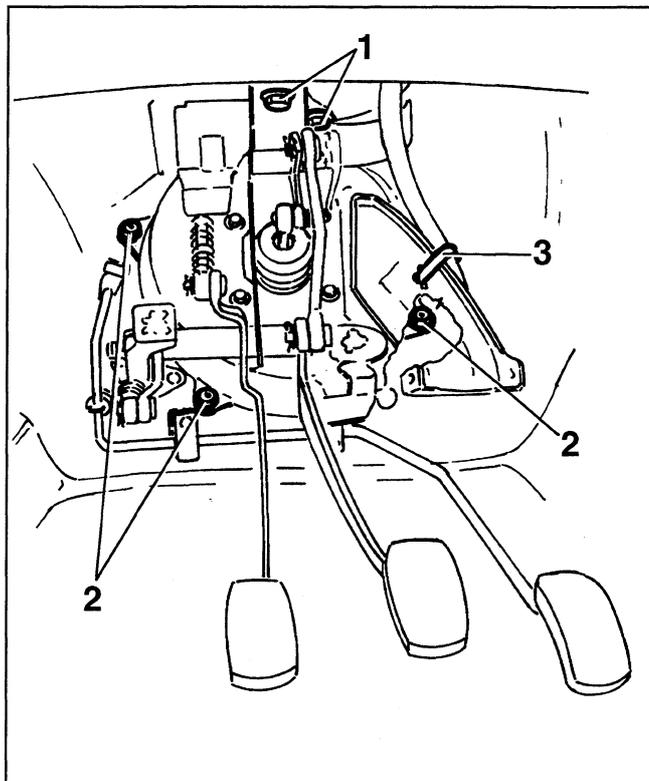
1. Disconnect and remove the fuse holders.
2. Slacken the centre nut and lower the fusebox.
3. Slacken the two small side nuts.
4. Release the two fusebox retaining springs.
5. Release the two pins of the fusebox bracket.
6. Move the fusebox aside.



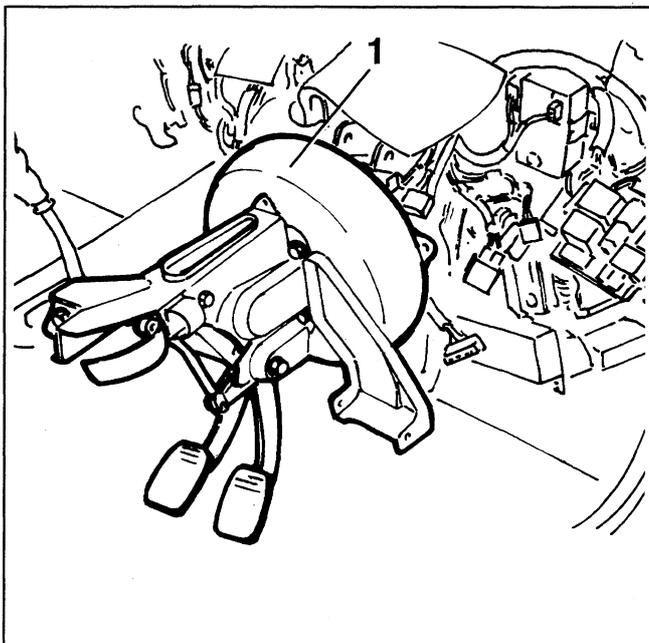
1. Slacken the four screws fastening the steering column support.
2. Slacken the heater unit stay screw.
3. Slacken the fastening screw of the fusebox support bracket.



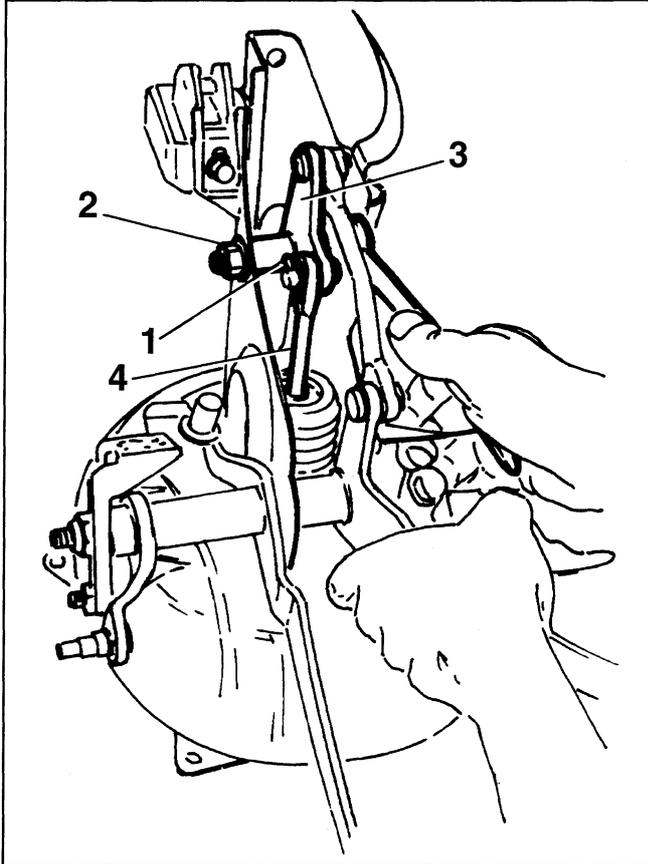
1. Slacken the two upper screws.
2. Slacken the three nuts fastening the servobrake cover.
3. Cut the clamp and free the wiring.



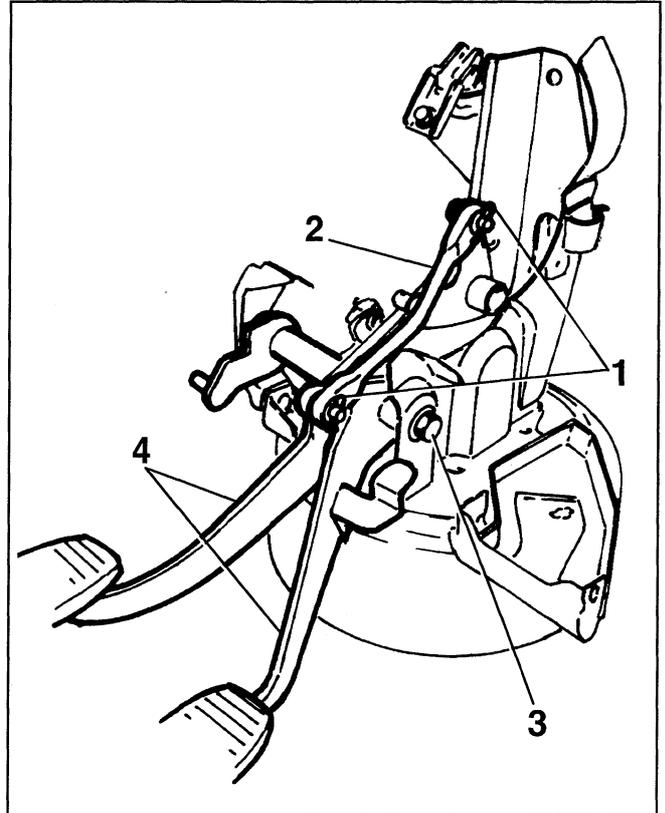
1. Remove the servobrake cover complete with pedal unit.



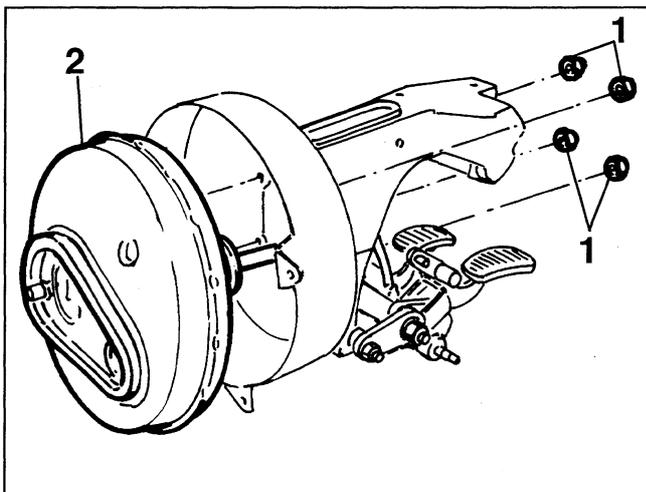
- Set the unit on the bench.
- 1. Remove the split pin and retrieve the washer.
- 2. Slacken the brake transmission bolt.
- 3. Release the transmission.
- 4. Free the servobrake control rod from the pin on the transmission.



- If necessary, disassemble the servobrake cover.
- 1. Remove the split pins and retrieve the washers.
- 2. Remove the brake control connecting rod.
- 3. Slacken the bolt.
- 4. Retrieve the pedals with their spacers.



- 1. Slacken the four nuts.
- 2. Remove the servobrake.



**STEERING**

**INDEX**

**STEERING CONTROL**

- Description . . . . . 1
- Steering column . . . . . 1
  - Removal/refitting . . . . . 1

**POWER STEERING**

- Steering box . . . . . 3
  - Removal/refitting . . . . . 3

For all information here not listed, see the corresponding section of "Spider-Gtv: Base Manual".

## STEERING CONTROL

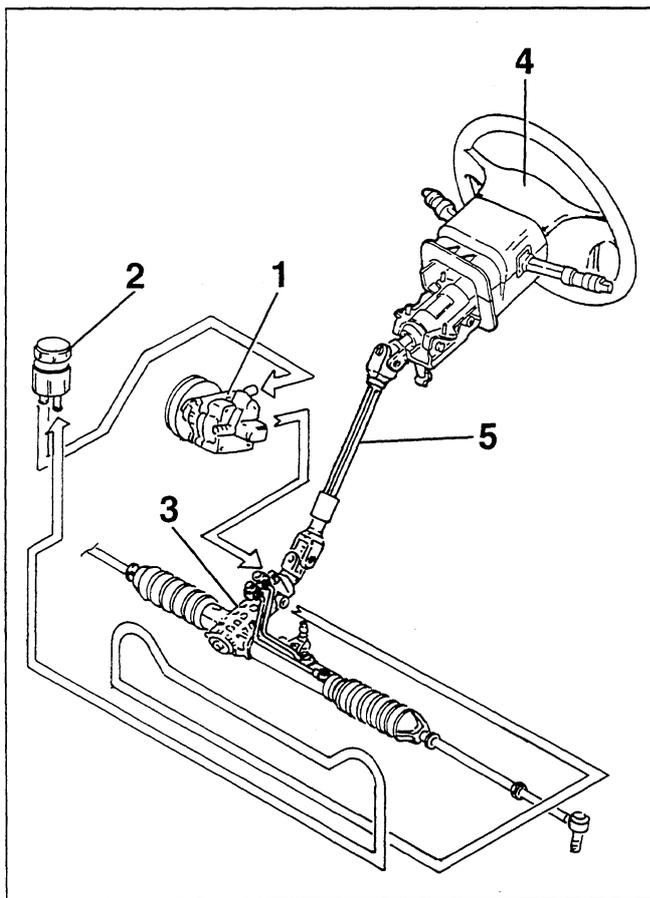
### DESCRIPTION

The power steering system reduces the effort at the steering wheel in manoeuvres at a standstill and keeps steering precise at high speeds.

The system comprises a pump (1) operated directly by the engine through a belt. The pump withdraws oil from the reservoir (2) in the engine compartment through the inlet pipe and sends it under pressure through the delivery pipe to the distributor valve on the power steering box (3).

The distributor valve, which is controlled by the turning of the steering wheel, sends the oil under pressure from one side or the other of the hydraulic cylinder which is integral with the rack and pinion, inside the steering box.

A section of the return pipe to the reservoir is positioned in front of the radiator and it is struck by the cooling air to remove heat and keep the hydraulic fluid at the correct temperature level.

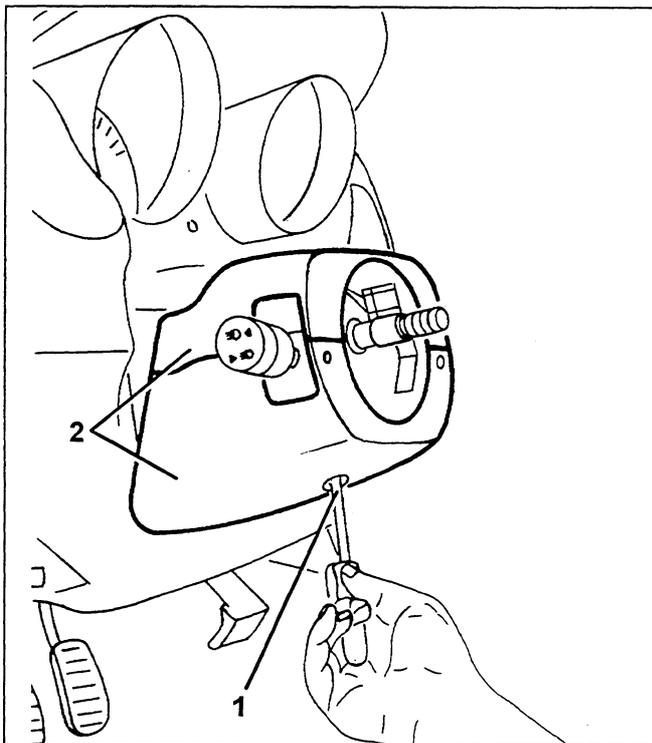


1. Pump
2. Reservoir
3. Steering box
4. Steering wheel
5. Steering column

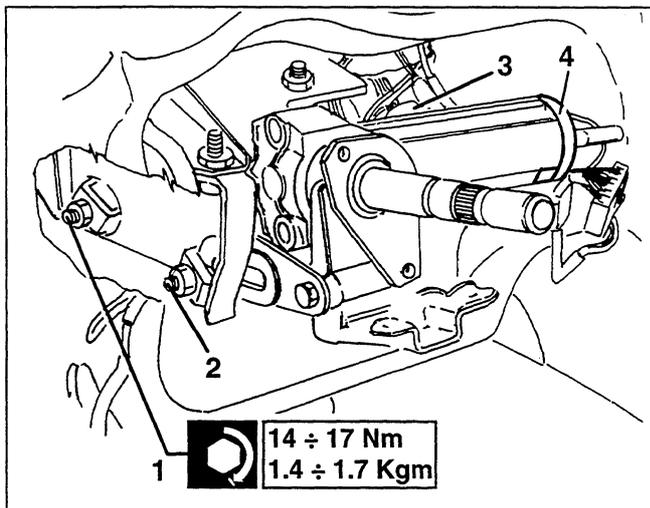
### STEERING COLUMN

#### REMOVAL/REFITTING

- Remove the steering wheel (see Base Manual).
- 1. Slacken the steering column half cover fastening screws from below.
- 2. Retrieve the half covers.

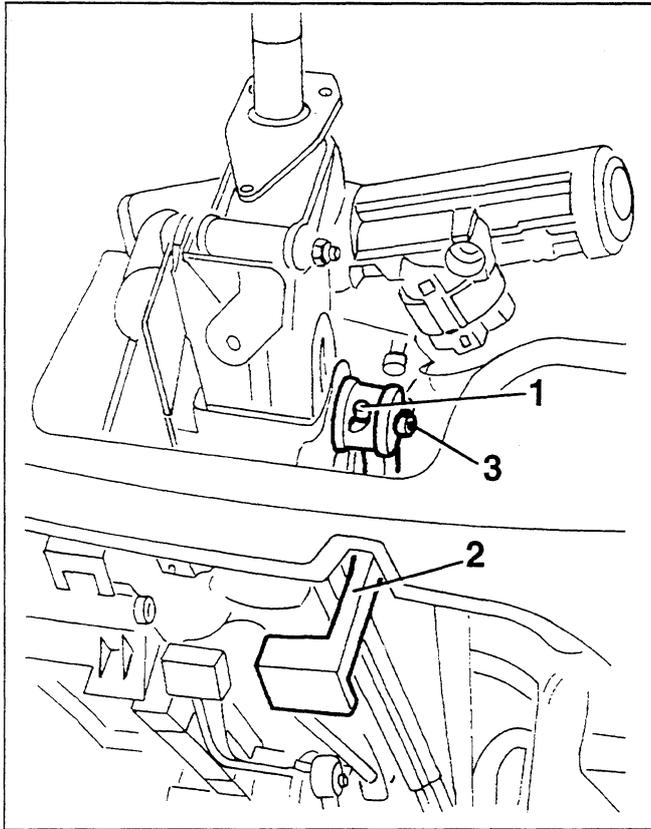


- Remove the steering column lever unit (see GROUP 55, Base Manual).
- Remove the fusebox cover from the dashboard front panel (see GROUP 70, Base Manual).
- 1. Slacken and remove the bolt of the lower slotted bracket for steering column axial adjustment.
- 2. Slacken the nuts of the upper slotted bracket.
- 3. Disconnect the connection from the ignition switch.
- 4. Withdraw the ALFA ROMEO CODE system aerial.

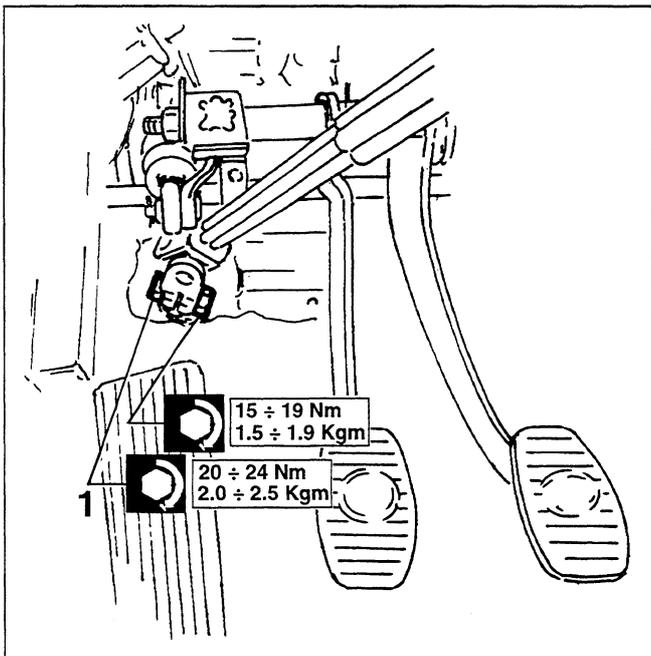


R.H. DRIVE

1. Withdraw the retainer pin.
2. Withdraw the steering wheel adjustment lever.
3. Remove the pin of the upper slotted bracket.



1. Slacken the bolt fastening the lower cardan joint to the steering box shaft
  - Remove the steering column complete.

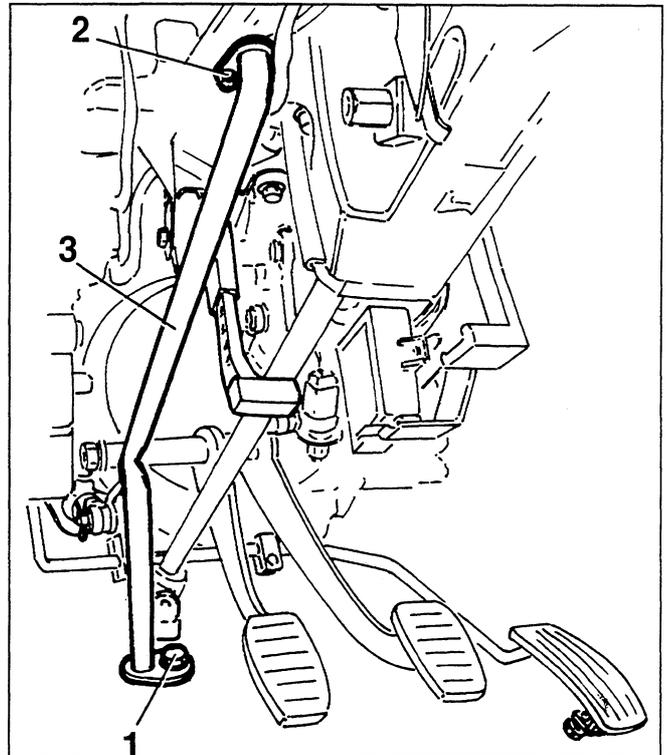


(Up to '97 version only)

1. If necessary, slacken the lower screw of the reaction pin.
2. Slacken the two upper screws.
3. Remove the reaction pin.

(From '98 version)

- Remove the steering column crossmember.



When refitting, reverse the sequence described for removal following the instructions given below.

- Check the steering wheel adjustment device as follows:
  1. Move the lever to the locking position.
  2. Tighten the nut and lock it to the specified torque.
  3. Move the lever to the release position.
  4. Check that steering column adjustment takes place correctly.
- Return the lever to the locking position.

