

**GROUP 23****STEERING SYSTEM****INDEX**

## STEERING SYSTEM

- |  |      |                               |      |
|--|------|-------------------------------|------|
| - DESCRIPTION.....                                     | 23-2 | - GENERAL SPECIFICATIONS..... | 23-4 |
| - POWER STEERING PUMP.....                             | 23-2 | - Fluids and lubricants.....  | 23-4 |
| - TECHNICAL CHARACTERISTICS<br>AND SPECIFICATIONS..... | 23-4 | - TIGHTENING TORQUES.....     | 23-4 |
|  |      | - SPECIAL TOOLING.....        | 23-5 |

For all the parts not mentioned herein, see the corresponding Group of the manual "155 - INSTRUCTIONS FOR REPAIR" - PA465500000000 - (pages with publication no. PA4655C1000000)



## STEERING SYSTEM

## DESCRIPTION

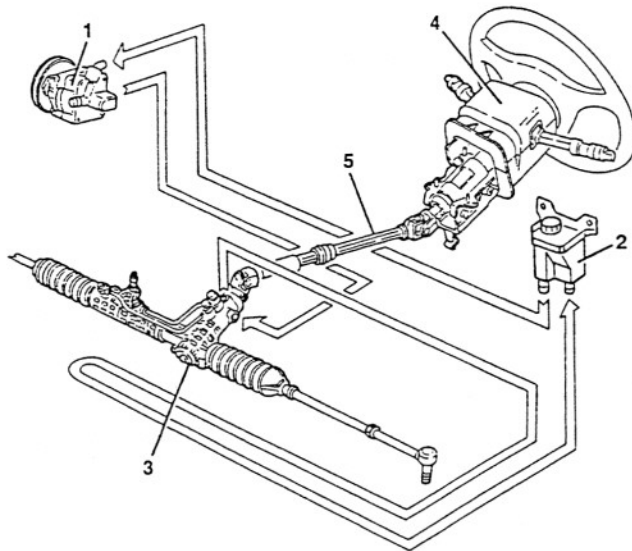
The power assisted steering system reduces effort at the steering wheel when manoeuvring from a standstill while keeping steering accurate at high speeds.

The system comprises a pump (1) operated directly by the engine through a belt. The pump withdraws oil through the suction pipe from the tank (2) located in the engine compartment and sends it under pressure

through the delivery pipe to the distributor valve on the power steering box (3).

The distributor valve, controlled by the turning of the steering wheel (4) and steering column (5), 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 pipe returns to the tank, thereby closing the circuit.



NOTE: the location of the components in the engine compartment is illustrated above.

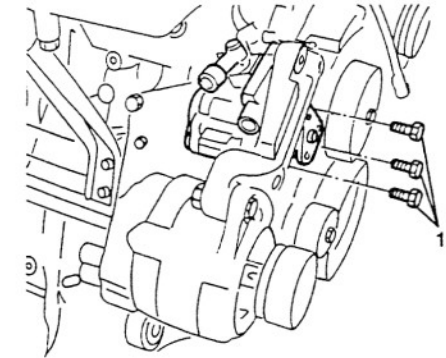
For the removing and refitting service procedures, refer to the corresponding group of the manual "155 - INSTRUCTIONS FOR REPAIR" PA46550000000 with the exception of the following concerning the power steering pump.

## POWER STEERING PUMP

## REMOVAL AND REFITTING

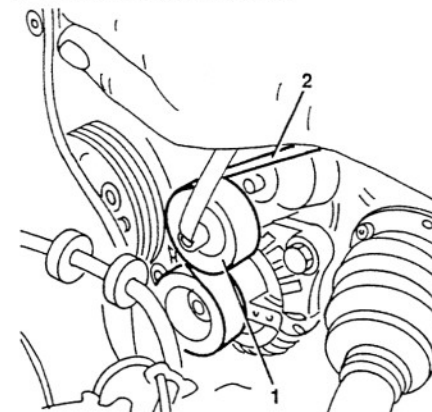
- Set the car on a lift.
  - Remove the right front wheel with gravel guard (see GROUP 70).
  - Remove the right engine compartment shield.
  - Using a syringe, withdraw the oil from the power steering tank
1. Slacken the belt tensioner and remove the pulley guide
  2. Remove the services drive belt.

1. Slacken the three fastening screws and remove the power steering pump

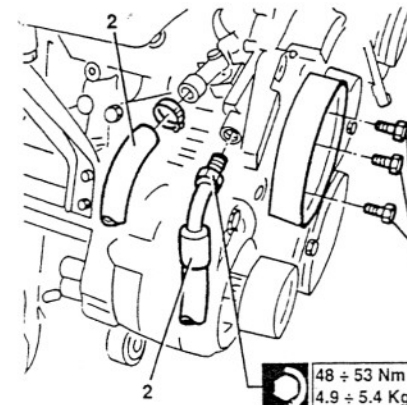


Refit the pump reversing the procedure followed for removal. Tension the belt as described in group 00.

Fill the hydraulic circuit and relieve the air (see specific paragraph).



1. Holding the pump shaft, slacken the three screws fastening the power steering pump pulley and remove it.
2. Working from above, disconnect the two pump inlet and delivery pipes.



48 ÷ 53 Nm  
4.9 ÷ 5.4 Kgm

**TECHNICAL CHARACTERISTICS AND SPECIFICATIONS****GENERAL SPECIFICATIONS****FLUIDS AND LUBRICANTS**

APPLICATION	TYPE	NAME
Filling power steering system	OIL	TUTELA GI/A
Roller bush seat on steering column support	GREASE	SPCA Spagraph ISECO Ergon Rubber Grease REINACH Sferal B2 AR

**TIGHTENING TORQUES**

Description	N·m	kg·m
Self-braking nut for fastening steering wheel to steering column	42 + 52	4.3 + 5.4
Self-braking nut for fastening track rod ball pin to wheel upright	29 + 36	3.0 + 3.7
Oil inlet pipe fitting on power steering	38 + 42	3.9 + 4.3
Oil outlet pipe fitting on power steering	29 + 32	3.0 + 3.3
Bolt fastening steering column to power steering pinion	17 + 21	1.7 + 2.1
Screws fastening steering box to front crossmember	47 + 57	4.8 + 5.8
Nut for locking steering track rod	10 + 15	1.0 + 1.5
Self-locking nuts for fastening steering column cardan joint forks	17 + 21	1.7 + 2.1
Self-locking nut fastening steering wheel on steering column	42 + 52	4.3 + 5.3
Screws fastening steering column to body	21 + 26	2.1 + 2.7
Screw fastening steering wheel adjustment lever	15 + 19	1.5 + 1.9
Nut fastening lower reaction strut (air-bag)	14 + 23	1.4 + 2.3
Rear steering wheel fastening screws (air-bag)	7 + 8	0.7 + 0.8

**SPECIAL TOOLING**

TOOL NUMBER	DESCRIPTION
1.821.105.000	Steering wheel puller tool
1.821.169.000	Track rod pin puller tool