155
T.SPARK 16V

REPAIR MANUAL

● MECHANICAL UNITS

GROUP 12

CLUTCH

INDEX

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

CLUTCH

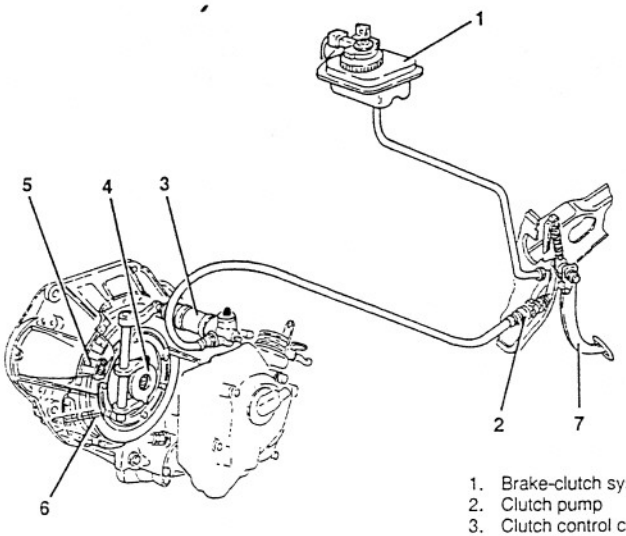
DESCRIPTION

The clutch adopted is single-plate, dry with diaphragm pressure plate springs.
The clutch is disengaged by a hydraulic device comprising a reservoir (1) shared with the braking system, a pump (2) fastened to the pedal unit, a control cylinder (3) fastened to the gearbox cover and a thrust bearing (4).
The pump, operated by the pedal, transmits the fluid pressure increase to the control cylinder piston through the special pipe.
Through a prod, the piston acts on the lever and transmits the control to the fork which moves the thrust bearing overcoming the action of the diaphragm pressure plate springs.

In addition to reducing the effort required on the pedal, the adoption of the hydraulic clutch release device makes it possible to obtain:

- increased reliability in relation to the conventional, mechanical solution.
- improved smoothness due to the damping of the hydraulic system during disengagement which avoids jerking, particularly when the transmitted torque is high.
- greater operating precision as this device permits constant adjustment of the height of the clutch pedal.
- increased driving comfort as a result of the reduction of the level of vibrations transmitted from the engine, due to the damping effect of the oil.

In order to meet the current laws concerning environmental pollution problems, ecological material (asbestos free) material has been used for the friction linings.



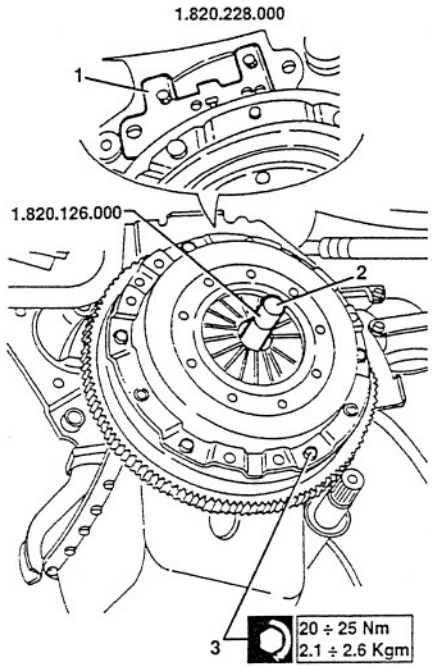
1. Brake-clutch system reservoir
2. Clutch pump
3. Clutch control cylinder
4. Thrust bearing
5. Clutch plate
6. Pressure plate
7. Clutch pedal

UTCH UNIT

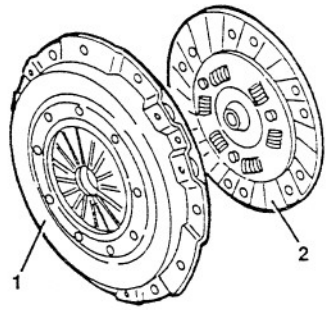
REMOVING/REFITTING

- Remove the gearbox-differential unit (see GROUP 13).
- When changing only the clutch plate, mark its position between the pressure plate and flywheel to simplify re-assembly operations.

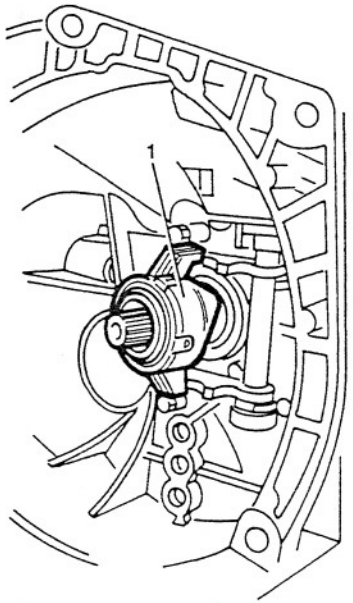
1. Install the flywheel stopper tool no. 1.820.228.000.
2. Install tool no. 1.820.126.000 in the clutch plate hub.
3. Slacken the screws fastening the pressure plate to the flywheel.



1. Remove the pressure plate.
2. Remove the clutch plate.

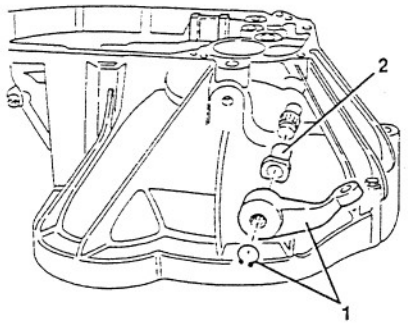


1. Withdraw the thrust bearing from its sleeve in the gearbox cover.



When refitting the bearing it must not stick or turn noisily, otherwise it must be replaced.

– Only if necessary:
1. Remove the seeger lockring and withdraw the clutch engagement control lever.
2. Prise and remove the antislip bush from the gearbox cover.
3. Working from inside the gearbox cover withdraw the clutch engagement sleeve control fork and pin.
4. Slacken the screws fastening the thrust bearing sleev and remove it.

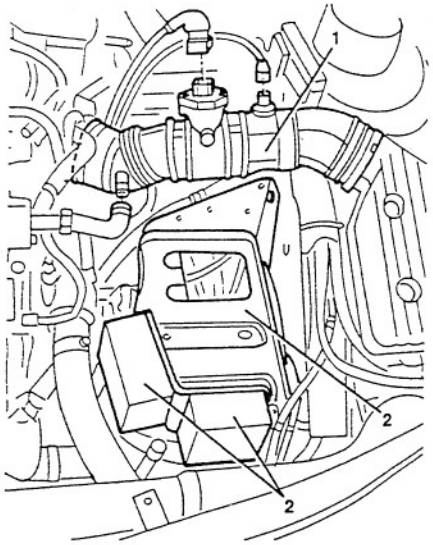


When refitting install a new antislip bush if the pin has too much play.
When refitting, grease the bushes and sleeve with the specified product. The sleeve complete with splash guard must be replaced each time oil leaks are found.

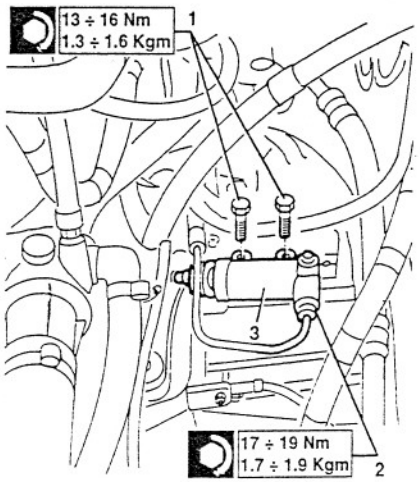
CLUTCH CONTROL CYLINDER

REMOVING / REFITTING

– Remove the battery after disconnecting the terminals.
1. Remove the corrugated air intake pipe between the cleaner and the throttle, after disconnecting it from the air-flow meter.
2. Remove the battery tray after separating the two injection relay support brackets.



– Empty the brake-clutch fluid reservoir using a suitable syringe.
1. Slacken the two screws fastening the clutch control cylinder
2. Disconnect the pump hose fitting from the clutch control cylinder.
3. Remove the clutch control cylinder.



TECHNICAL CHARACTERISTICS AND SPECIFICATIONS

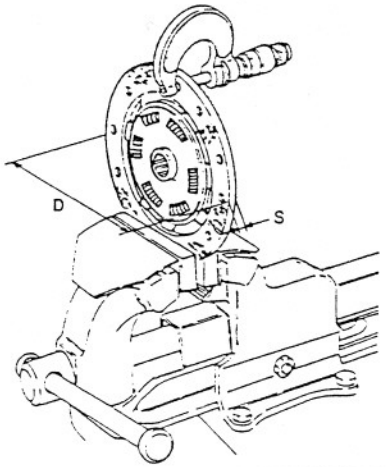
GENERAL SPECIFICATIONS

FLUIDS AND LUBRICANTS

APPLICATION	TYPE	NAME
Thrust bearing housing and clutch control lever shaft Clutch control cylinder prod	GREASE	TUTELA MR3
Lubrication of pump inner components and hydraulic system filling	FLUID Class: DOT 4 SAE J 1703 F	ALFA ROMEO BRAKE FLUID SUPER DOT 4

CHECKS AND ADJUSTMENTS

CLUTCH PLATE



Clutch plate thickness	New	7.1 ÷ 7.7 mm
	At wear limit	6.3 mm
Clutch plate diameter		228.5 mm

TIGHTENING TORQUES

Part	Nm	kgm
Screws fastening pressure plate to flywheel	20 ÷ 25	2.1 ÷ 2.6
Screws fastening clutch control cylinder to gearbox cover	13 ÷ 16	1.3 ÷ 1.6
Nuts fastening clutch pump to pedal unit	13 ÷ 21	1.3 ÷ 2.1
Clutch circuit pipe fitting on pump	17 ÷ 19	1.7 ÷ 1.9
Clutch circuit pipe fitting on control cylinder	17 ÷ 19	1.7 ÷ 1.9
Thrust plate bearing sleeve fastening screws	7 ÷ 9	0.7 ÷ 0.9

SPECIAL TOOLING

TOOL NUMBER	DESCRIPTION
1.820.126.000	Tool for centering clutch plate
1.820.228.000	Flywheel stopper tool