
GROUP 12

CONTENTS

DESCRIPTION	12-2	General specifications	12-4
CLUTCH ASSEMBLY		Checks and Adjustments	12-6
COMPONENTS	12-3	Tightening torques	12-7
SERVICE DATA AND		SPECIAL SERVICE TOOLS	12-8
SPECIFICATIONS	12-4		

This group is structurally similar to that of the vehicle **6TV625** and consequently the disassembly and reassembly procedures remain the same.

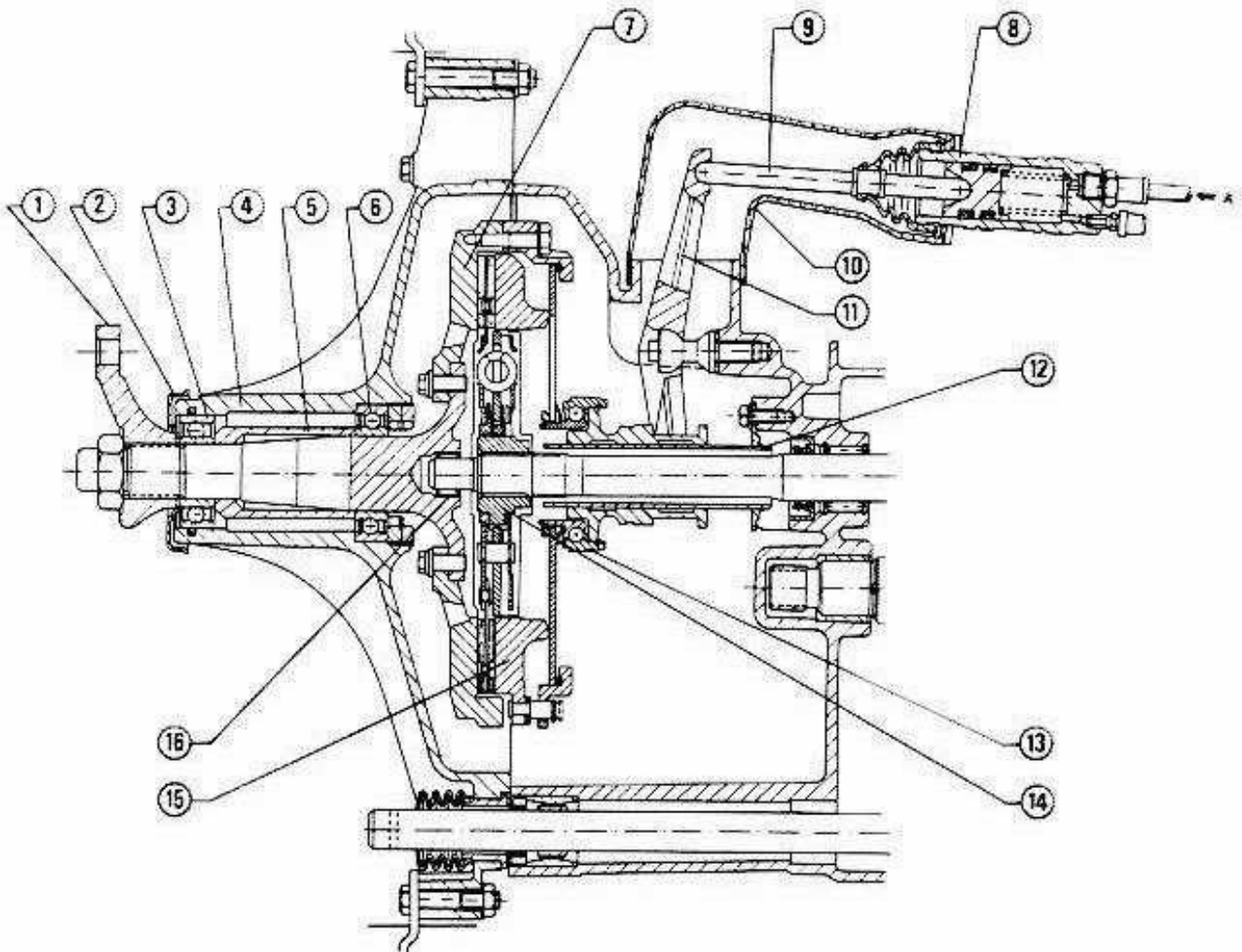
DESCRIPTION

- The clutch used is of the hydraulic control type with automatic taking-up.
- Clutch disengagement is realized by means of the special master cylinder which, operated by clutch pedal, transmits the pressure increase of system (supplied by the clutch

and brake fluid tank) to piston of operating cylinder (8). This last, through push rod (9) operates on clutch disengagement fork (11) which moves thrust bearing (13) and wins diaphragm spring action with consequent backing of driven plate (14) and clutch disengagement.

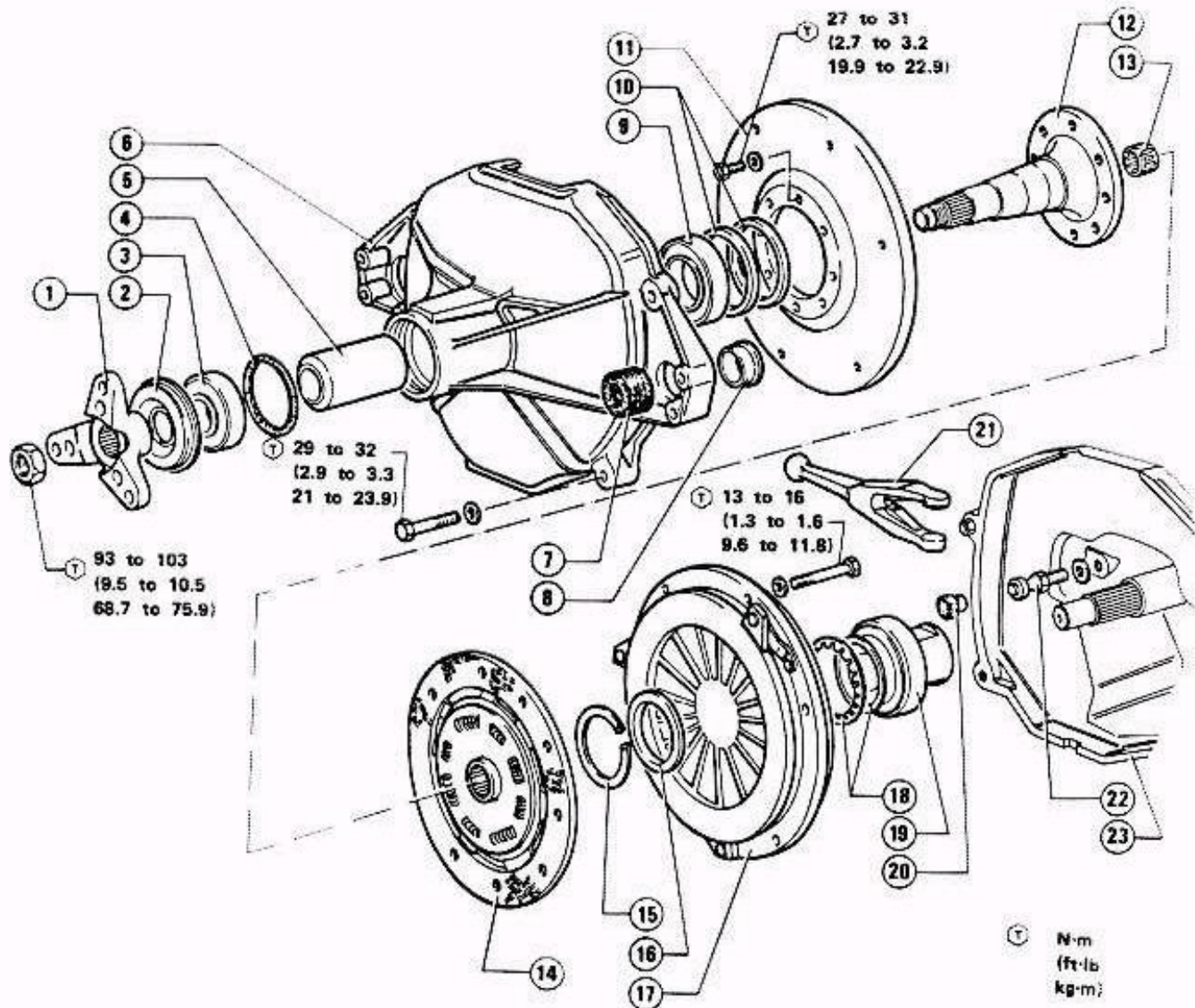
- The peculiarity of the hydraulic

control is that of keeping thrust bearing (13) in contact with diaphragm spring of pressure plate body (15), independently of driven plate wear degree, thus realizing taking-up in an automatic and progressive way. As a consequence, no adjustment is required for the clutch.



- | | |
|--------------------------------------|---|
| 1 Propeller shaft connection fork | 9 Push rod |
| 2 Dust cover | 10 Guard |
| 3 Clutch shaft support front bearing | 11 Clutch disengagement fork |
| 4 Clutch cover | 12 Sleeve |
| 5 Spacer | 13 Thrust bearing |
| 6 Clutch shaft support rear bearing | 14 Driven plate |
| 7 Clutch flywheel | 15 Pressure plate body |
| 8 Clutch operating cylinder | 16 Speed gear main shaft centering needle bearing |

CLUTCH ASSEMBLY COMPONENTS



- 1 Propeller shaft connection fork
- 2 Dust cover
- 3 Clutch cover front bearing
- 4 O-Ring
- 5 Spacer
- 6 Clutch cover
- 7 Speeds engagement and selection rod boot
- 8 Speeds engagement and selection rod bush
- 9 Clutch cover rear bearing
- 10 Threaded ring nuts for rear bearing securing
- 11 Clutch flywheel
- 12 Clutch shaft

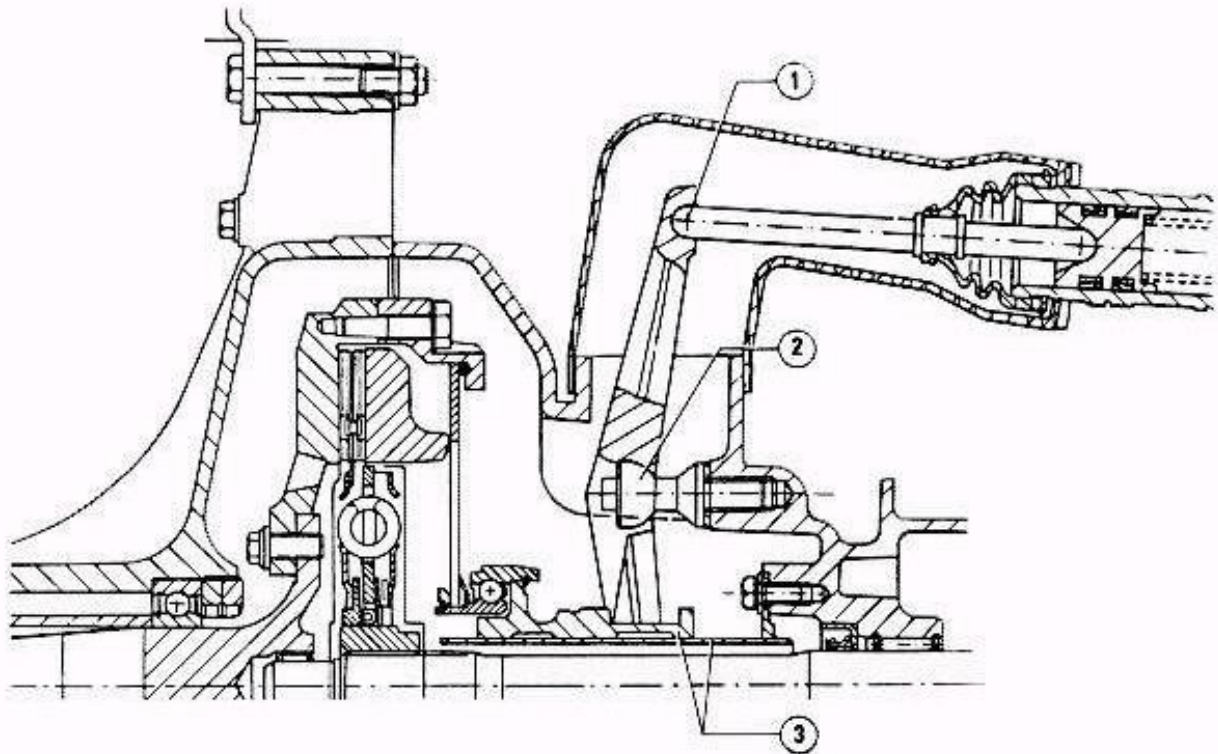
- 13 Needle bearing
- 14 Clutch plate
- 15 Retaining ring
- 16 Ring
- 17 Pressure plate body
- 18 Belleville springs
- 19 Thrust bearing
- 20 Rubber cap on spherical pin
- 21 Fork
- 22 Spherical pin
- 23 Clutch-speed gear casing

T N-m
(ft-lb
kg-m)

SERVICE DATA AND SPECIFICATIONS

GENERAL SPECIFICATIONS

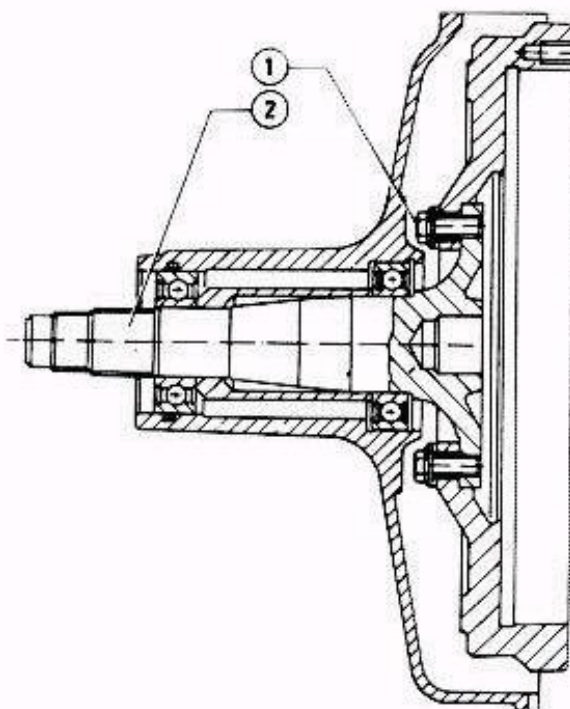
FLUIDS AND LUBRICANTS



Application	Type	Name	Q.ty
① Spherical seat and clutch operating cylinder push rod ② Spherical pin and clutch disengagement fork spherical seat ③ Thrust bearing seat and clutch disengagement fork	GREASE	- AGIP Grease 33FD - IP Autogrease FD Std. No. 3671-69833/34	
Propeller shaft rear joint spherical seat	GREASE	ISECO Molykote BR2 Std. No. 3671-69841	5 cm ³ 0.3 cuin
Clutch hydraulic system filling	FLUID	- AGIP Brake Fluid Super HD - ATE "S" - IP Auto Fluid F.R. Std. No. 3681-69905 CAUTION: Product harmful to paint. Keep it away from paint on view	-

CLUTCH

SEALANTS



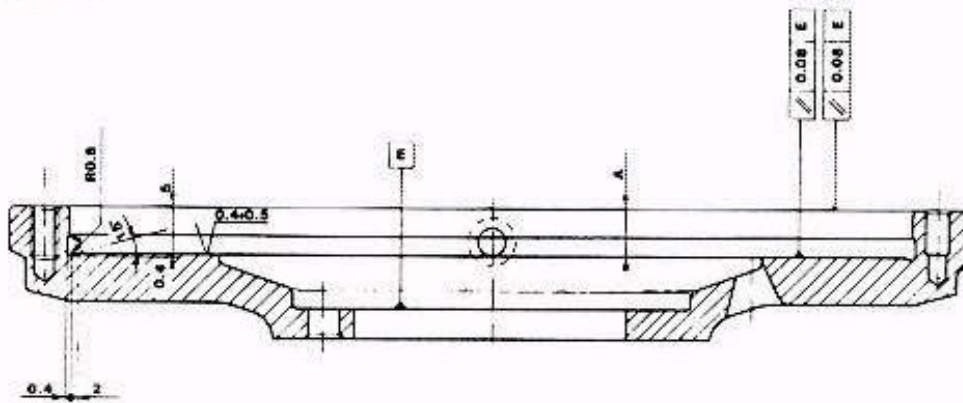
Application	Type	Name	Q.ty
① Threading of screws securing clutch shaft to flywheel - See note (1)	SEALING COMPOUND	LOCTITE Stud Lok (Red) Std. No. 3524-00002	
② Clutch shaft splined tang for propeller shaft connecting fork - See note (1)	SEALING COMPOUND	LOCTITE 242 (Blue) Std.No. 3524-00010	

(1) Before applying sealing compound, remove any trace of old compound by swabbing and blowing the surfaces concerned. Remove grease from surfaces with trichloroethylene and clorothene.

CLUTCH

CHECKS AND ADJUSTMENTS

CLUTCH FLYWHEEL



Clutch diameter		215 mm (8.46 in)
Dimensions		
Rectification Removal of material on driven plate support plane must be such that the dimension between driven plate support plane and clutch cover is within the A value Should dimension A be out of tolerance, remove material also from support plane of clutch cover		A mm (in) 12.5 + 0.2 (10.49 + 0.01)
Tolerances - Parallelism error between driven plate support plane and clutch shaft connection plane - Parallelism error between clutch cover support plane and clutch shaft connection plane - Roughness of driven plate support plane		// mm (in) 0.08 (0.003) // mm (in) 0.08 (0.003) $\sqrt{\mu\text{m}}$ 0.4 to 0.5

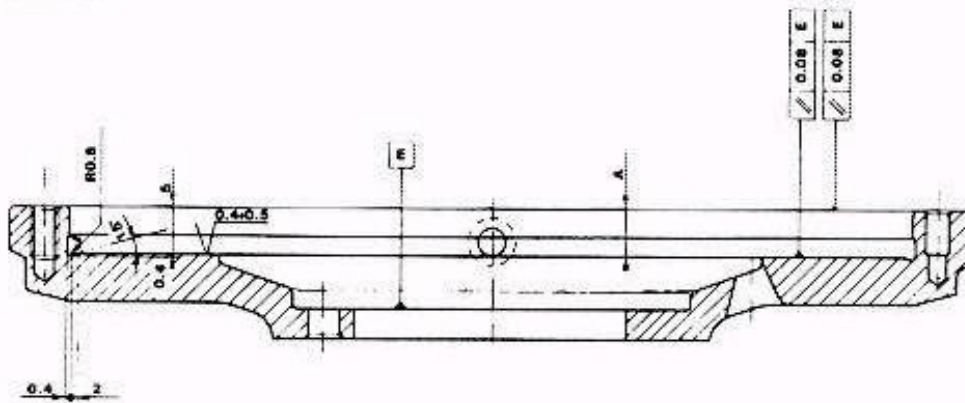
CLUTCH

Dimensions		
Pressure plate-flywheel static balancing (max out-of-balance allowed)		g cm (in lb) 10 (0.0086)
Operating cylinder pushrod travel		C mm (in) 12.5 (0.5)

CLUTCH

CHECKS AND ADJUSTMENTS

CLUTCH FLYWHEEL



	Clutch diameter	215 mm (8.46 in)
Dimensions		
Rectification Removal of material on driven plate support plane must be such that the dimension between driven plate support plane and clutch cover is within the A value Should dimension A be out of tolerance, remove material also from support plane of clutch cover	A mm (in)	12.5 + 0.2 (10.49 + 0.01)
Tolerances - Parallelism error between driven plate support plane and clutch shaft connection plane - Parallelism error between clutch cover support plane and clutch shaft connection plane - Roughness of driven plate support plane	// mm (in) // mm (in) $\sqrt{\mu\text{m}}$	0.08 (0.003) 0.08 (0.003) 0.4 to 0.5

CLUTCH

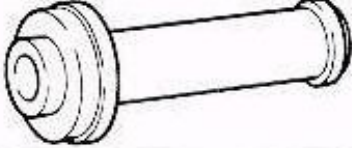
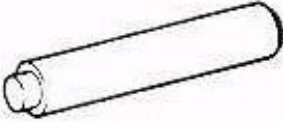
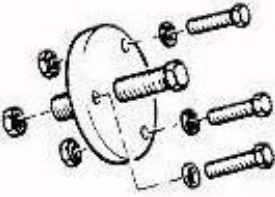
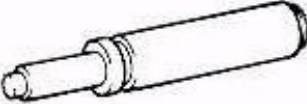
Dimensions		
Pressure plate-flywheel static balancing (max out-of-balance allowed)	g cm (in lb)	10 (0.0086)
Operating cylinder pushrod travel	C mm (in)	12.5 (0.5)

CLUTCH

TIGHTENING TORQUES

Item	Unit	N·m (ft·lb; Kg·m)
Screws securing propeller shaft coupling to clutch shaft fork		55 to 57 (40.5 to 41.9; 5.6 to 5.8)
Screws securing pressure plate to clutch flywheel		13 to 16 (9.6 to 11.8; 1.3 to 1.6)
Screws securing clutch shaft to flywheel (for sealant compounds refer to: "Sealants")		27 to 31 (19.9 to 22.9; 2.7 to 3.2)
Nut securing propeller shaft connecting fork to clutch shaft		93 to 103 (68.7 to 75.9; 9.5 to 10.5)
Screws securing clutch unit to differential-speed gear unit		29 to 32 (21 to 23.9; 2.9 to 3.3)
Hydraulic system pipe unions:		
Hoses		10 to 15 (7.2 to 10.8; 1 to 1.5)
Pipes		8 to 10 (5.8 to 7.2; 0.8 to 1)
Screws securing speed gear-differential unit to lateral support small block		18.6 to 23.5 (13.7 to 17.3; 1.9 to 2.4)

SPECIAL SERVICE TOOLS

Tool P.M.	Name	Page Ref
A.3.0282	Driver for rear bearing 	-
A.3.0405	Driver for centering bush on flywheel-clutch shaft 	-
A.3.0600	Puller for propeller shaft connecting fork 	-
A.4.0205	Tool for clutch plate centering 	-