GROUP 12

CONTENTS

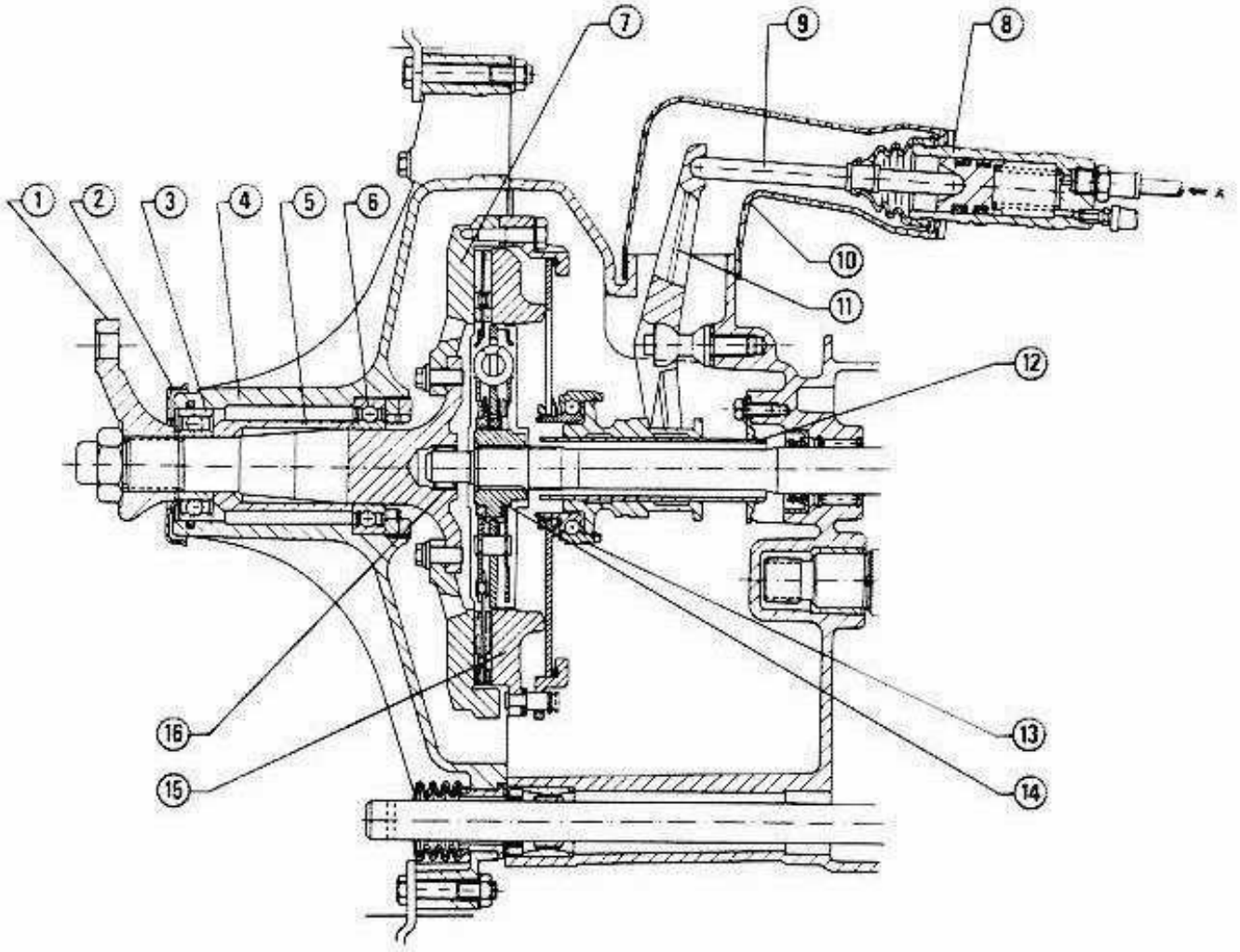
This group is structurally similar to that of the vehicle GTV6 2.5 and consequently the disassembly and reassembly procedures remain the same.

DESCRIPTION

- The clutch used is of the hydraulic control type with automatic taking-up.

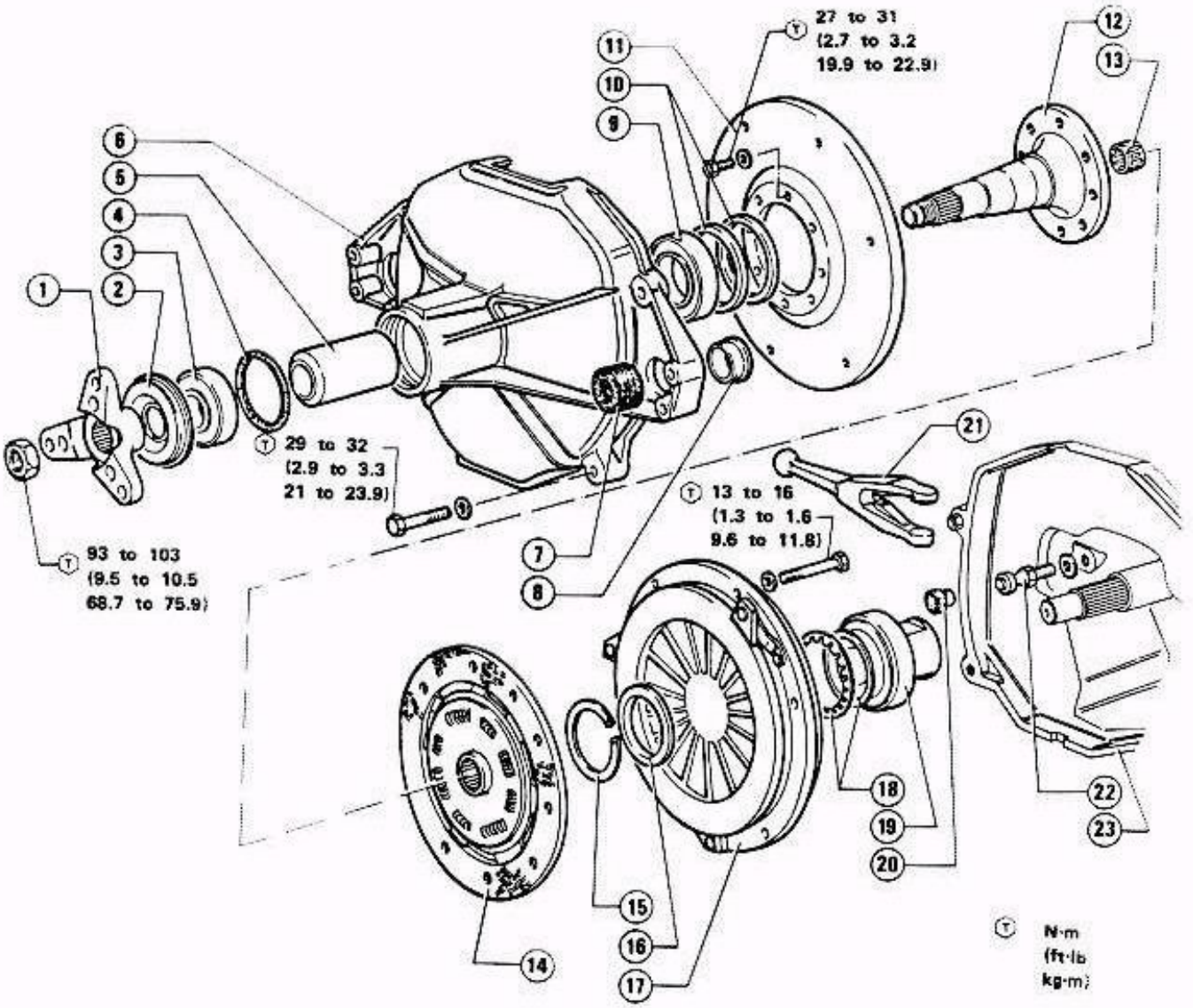
- Clutch disengagement is realized by means of the special master cylinder which, operated by clutch pedal transmits the pressure increase of system (supplied by the clutch and brake fluid tank) to piston of operating cylinder (8).
This last, through push rod (9) operates on clutch disengagement fork (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
2 Dust cover
3 Clutch shaft support front bearing
4 Clutch cover
5 Spacer
6 Clutch shaft support rear bearing
7 Clutch flywheel
8 Clutch operating cylinder
9 Push rod
10 Guard
11 Clutch disengagement fork
12 Sleeve
13 Thrust bearing
14 Driven plate
15 Pressure plate body
16 Speed gear main shaft centering needle bearing

CLUTCH ASSEMBLY COMPONENTS

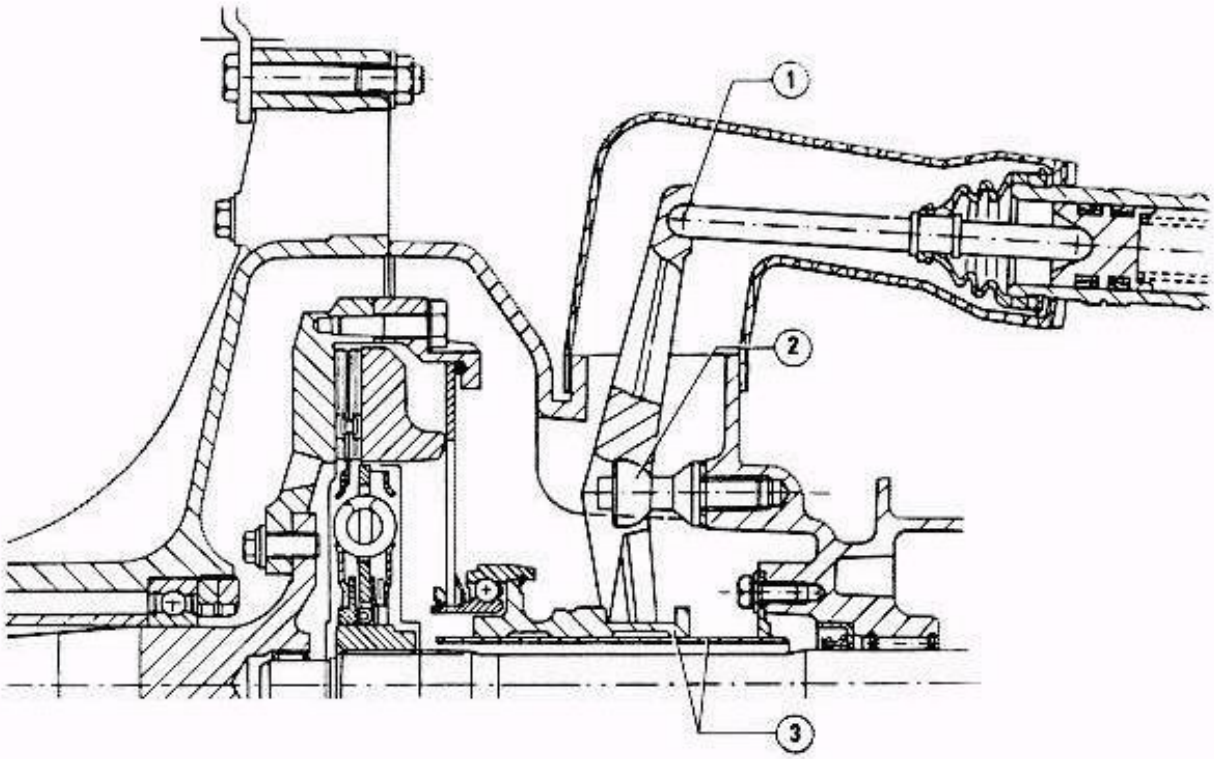


1 Propeller shaft connection fork
2 Dust cover
3 Clutch cover front bearing
4 O-Ring
5 Spacer
6 Clutch cover
7 Speeds engagement and selection rod boot
8 Speeds engagement and selection rod bush
9 Clutch cover rear bearing
10 Threaded ring nuts for rear bearing securing
11 Clutch flywheel
12 Clutch shaft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

SERVICE DATA AND SPECIFICATIONS

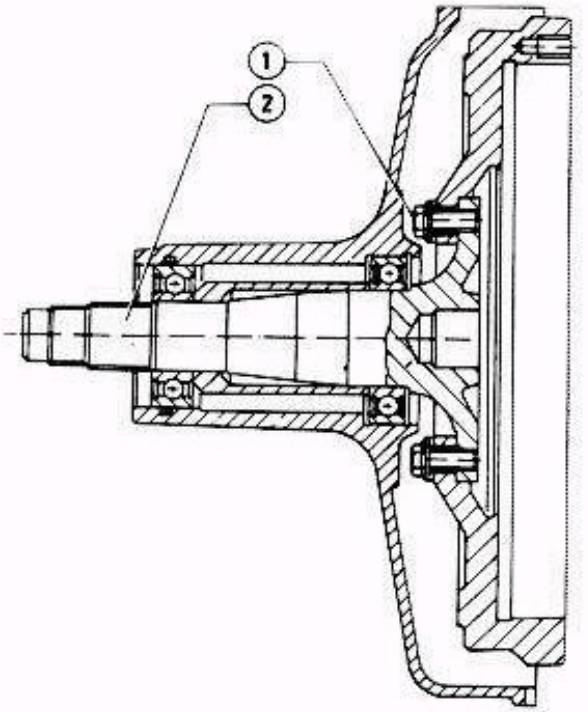
GENERAL SPECIFICATIONS

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**	-

SEALANTS

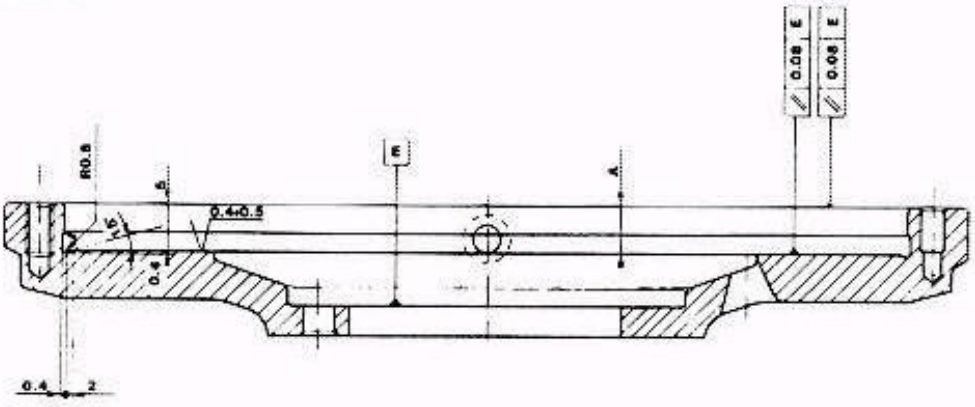


Application	Type	Name	Q.ty
① Threading of screws securing clutch shaft to flywheel - See note (1)	SEALING COMPOUND	LOCTITE Stud Lok (Red) Std. No. 3524-00002	
② Clutch shaft splined tang for propeller shaft connecting fork - See note (1)	SEALING COMPOUND	LOCTITE 242 (Blue) Std.No. 3524-00010	-

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

CHECKS AND ADJUSTMENTS

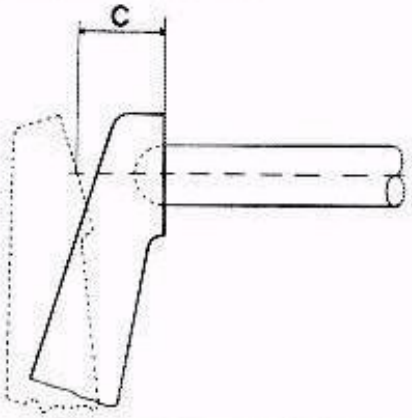
CLUTCH FLYWHEEL



Dimensions		Clutch diameter 215 mm (8.46 in)
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 (0.49 + 0.01)
Tolerances – Parallelism error between driven plate support plane and clutch shaft connection plane	// mm (in)	0.08 (0.003)
– Parallelism error between clutch cover support plane and clutch shaft connection plane	// mm (in)	0.08 (0.003)
– Roughness of driven plate support plane	$\sqrt{\mu m}$	0.4 to 0.5

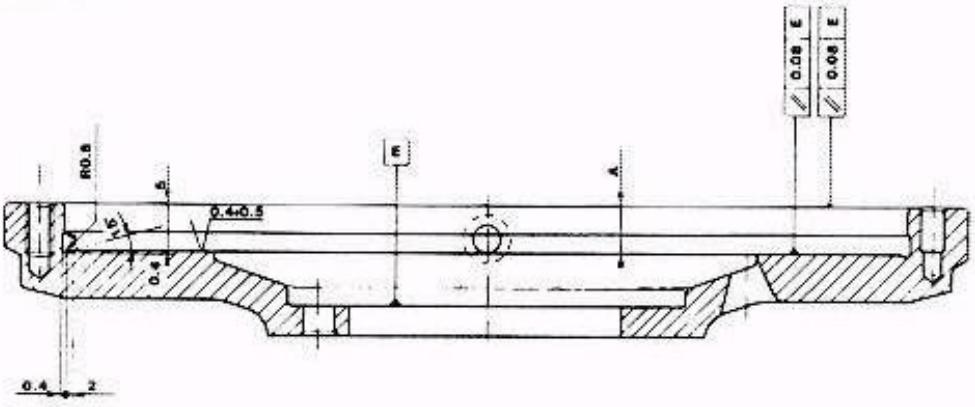
CLUTCH

			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)



CHECKS AND ADJUSTMENTS

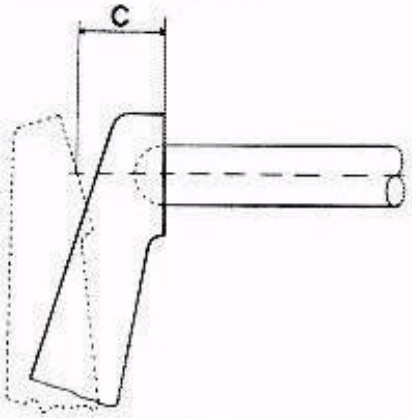
CLUTCH FLYWHEEL



Dimensions		Clutch diameter 215 mm (8.46 in)
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 (0.49 + 0.01)
Tolerances – Parallelism error between driven plate support plane and clutch shaft connection plane	// mm (in)	0.08 (0.003)
– Parallelism error between clutch cover support plane and clutch shaft connection plane	// mm (in)	0.08 (0.003)
– Roughness of driven plate support plane	$\sqrt{\mu m}$	0.4 to 0.5

CLUTCH

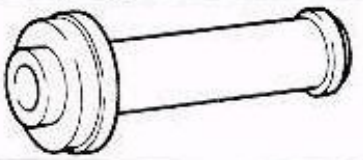
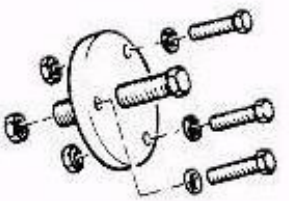
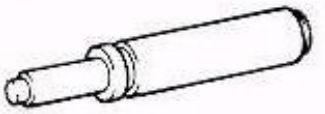
			Dimensions
Pressure plate-flywheel static balancing (max out-of-balance allowed)		g cm (in lb)	10 (0.0086)
Operating cylinder pushrod travel	C	mm (in)	12.5 (0.5)



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 	–