

GEAR-CHANGE REMOTE CONTROL ASSEMBLY MOUNTINGS

Remove and refit

37.16.25

Removing

- 1 Disconnect the battery.
- 2 Engage 1st or 3rd gear.
- 3 Raise the car and support securely.
- 4 Remove the four bolts (two top, one either side), plain washers and spring washers securing the remote control assembly to the rear cover.
- 5 Remove the eight rubber bushes and four spacers. Note the relationships of the stepped rubber bushes.

Refitting

- 6 Reverse instructions 1 to 5.

GEARBOX ASSEMBLY — V8

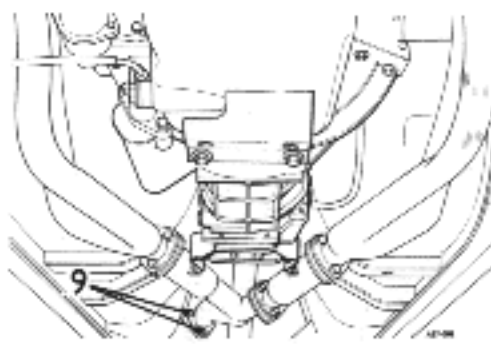
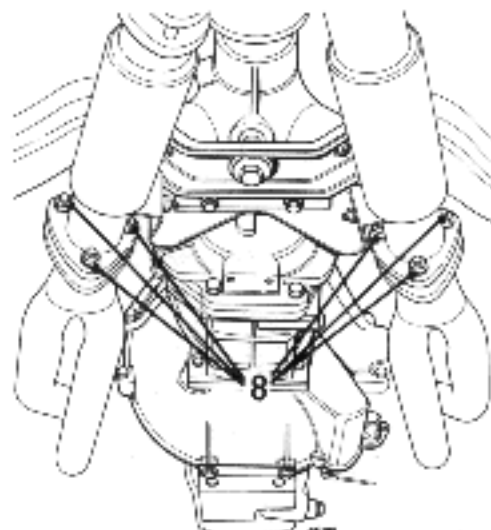
Remove and refit

37.20.01

Removing

- 1 Drive the vehicle onto a ramp.
- 2 Remove the gear-lever knob.
- 3 Remove the two gear-lever rubber grommets.
- 4 Remove the bolt and setscrews securing the bias spring bracket to the gear-lever remote extension.
- 5 Undo the gear-lever ball cover retaining bolt and washer.
- 6 Prise the bias spring over the adjusting bolt heads and remove the gear lever and ball cover. Take care not to lose the nylon plunger and spring from the gear lever.
- 7 Raise the ramp.
- 8 Remove the exhaust down-pipe flange bolts, three each side.
- 9 Remove the three branch pipe to intermediate pipe flange bolts.
- 10 Remove the two down-pipe gearbox mounting nuts, bolts and washers.
- 11 Remove the front section of the exhaust system up to the intermediate pipe.

- 12 Disconnect the propeller shaft drive flange from the gearbox drive flange, four bolts and Nyloc nuts.
- 13 Position a ramp jack under the engine sump. Interpose a piece of wood to prevent damaging the engine sump.
- 14 Raise the jack to support the engine.

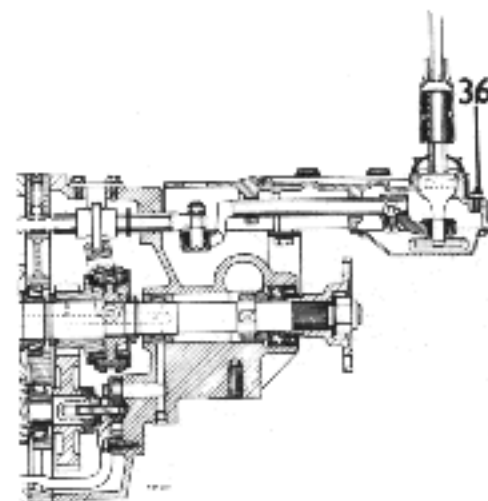


- 15 Remove the four bolts, spring washers, and the two plates securing the engine rear mounting to the body.
- 16 Lower the ramp jack, taking care not to foul the engine bulkhead with the air cleaner assembly.
- 17 Remove the speedometer cable clamp bolt, and remove the cable.
- 18 Disconnect the reverse light switch leads at the two snap connectors and bend back the tab to release the harness from the gearbox.
- 19 Remove the two bolts and washers securing the sump stiffener plate to the gearbox.
- 20 Remove the two bolts securing the clutch slave cylinder to the gearbox bell housing and withdraw the slave cylinder.
- 21 Remove the four bolts retaining the fly-wheel cover-plate to the gearbox bell housing.
- 22 Remove the eight bolts securing the gearbox bell housing to the rear engine plate. Note lengths and positions.
- 23 Remove the gearbox.

Refitting

- 24 Engage first gear.
- 25 Refit the gearbox to the engine and secure the gearbox bell housing to the engine plate with the eight bolts and spring washers in their previously noted positions. Disengage first gear.
- 26 Refit the reverse light harness to the gearbox, bend over the retaining tab, and reconnect the two snap connectors.
- 27 Refit the speedometer cable and secure with the clamp bolt.
- 28 Raise the ramp jack.
- 29 Locate the rear engine mounting to the body, securing with the four bolts, spring washer and the two metal plates, and check the dimension in operation 12.37.01, instruction 48.
- 30 Lower the ramp jack.
- 31 Refit the clutch slave cylinder, ensuring that the push-rod is correctly located in the clutch operating arm.

- 32 Refit the propeller shaft drive flange to the gearbox drive flange and secure with the four bolts and Nyloc nuts.
- 33 Refit the exhaust system.
- 34 Lower the ramp.
- 35 Refit the gear lever, ensure that the spring and nylon plunger are in position.



- 36 Refit the gear-lever ball cover and secure with the bolt and washer.
- 37 Reposition the bias spring ends so that they locate on the heads of the adjustment bolts.
- 38 Tighten the bias spring clamp bolt and setscrew.
- 39 Refit the gear-lever rubber grommets.
- 40 Refit the gear-lever knob.

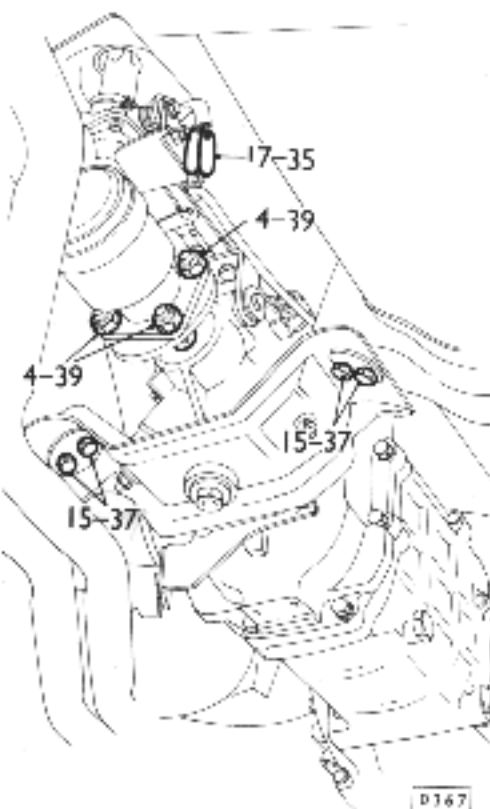
GEARBOX ASSEMBLY — 6-cylinder

Remove and refit

37.20.01

Removing

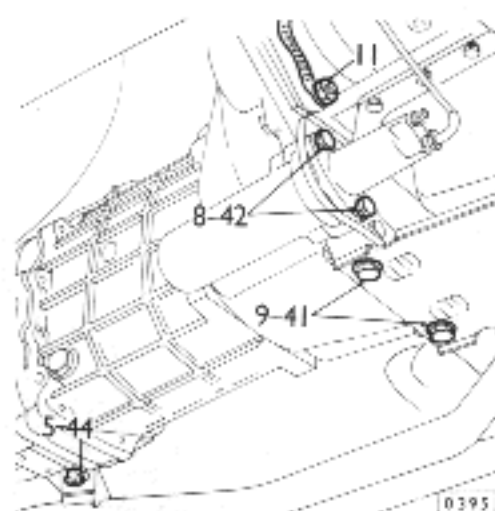
- 1 Drive the vehicle onto a ramp.
- 2 Remove the gear-change lever, see 37.16.04.
- 3 Raise the ramp.
- 4 Disconnect the four bolts and Nyloc nuts securing the propshaft to the gearbox drive flange and displace the propshaft to one side.



- 7 Remove the front section of the exhaust system from the intermediate pipe.
- 8 Remove the two bolts securing the clutch slave cylinder to the gearbox bell housing and withdraw the slave cylinder.
- 9 Remove the two bolts and washers securing the sump stiffener plate to the gearbox.
- 10 Remove the three bolts retaining the flywheel cover-plate to the gearbox bell housing and remove the plate.
- 11 Remove the lower bolt securing the starter motor to the engine plate and displace the earth lead.
- 12 Remove the starter motor upper securing bolt and reposition starter clear of the gearbox.
- 13 Position a ramp jack under the engine sump. Interpose a piece of wood to prevent damaging the sump.
- 14 Support the engine on the ramp jack.
- 15 Remove the four bolts, spring washers and the two plates securing the rear mounting cross-member to the body.
- 16 Lower the engine on the ramp jack.
- 17 Disconnect the reverse light switch leads at the two snap connectors and bend back the harness clips to release the harness from the gearbox.
- 18 Remove the speedometer cable clamp bolt, and remove the cable from the gearbox.
- 19 Remove the securing bolt and displace the transducer unit from the clutch housing.
- 20 Remove the dowel bolt and the nuts and bolts securing the clutch housing to the engine leaving three bolts supporting the gearbox.
- 21 Position the diagnostic plug socket away from the clutch housing.
- 22 Support the gearbox on a unit lift.
- 23 Remove the three remaining securing bolts and displace the water rail from the clutch housing.
- 24 Remove the gearbox from the vehicle.
- 25 Remove ancillary equipment as necessary.

Refitting

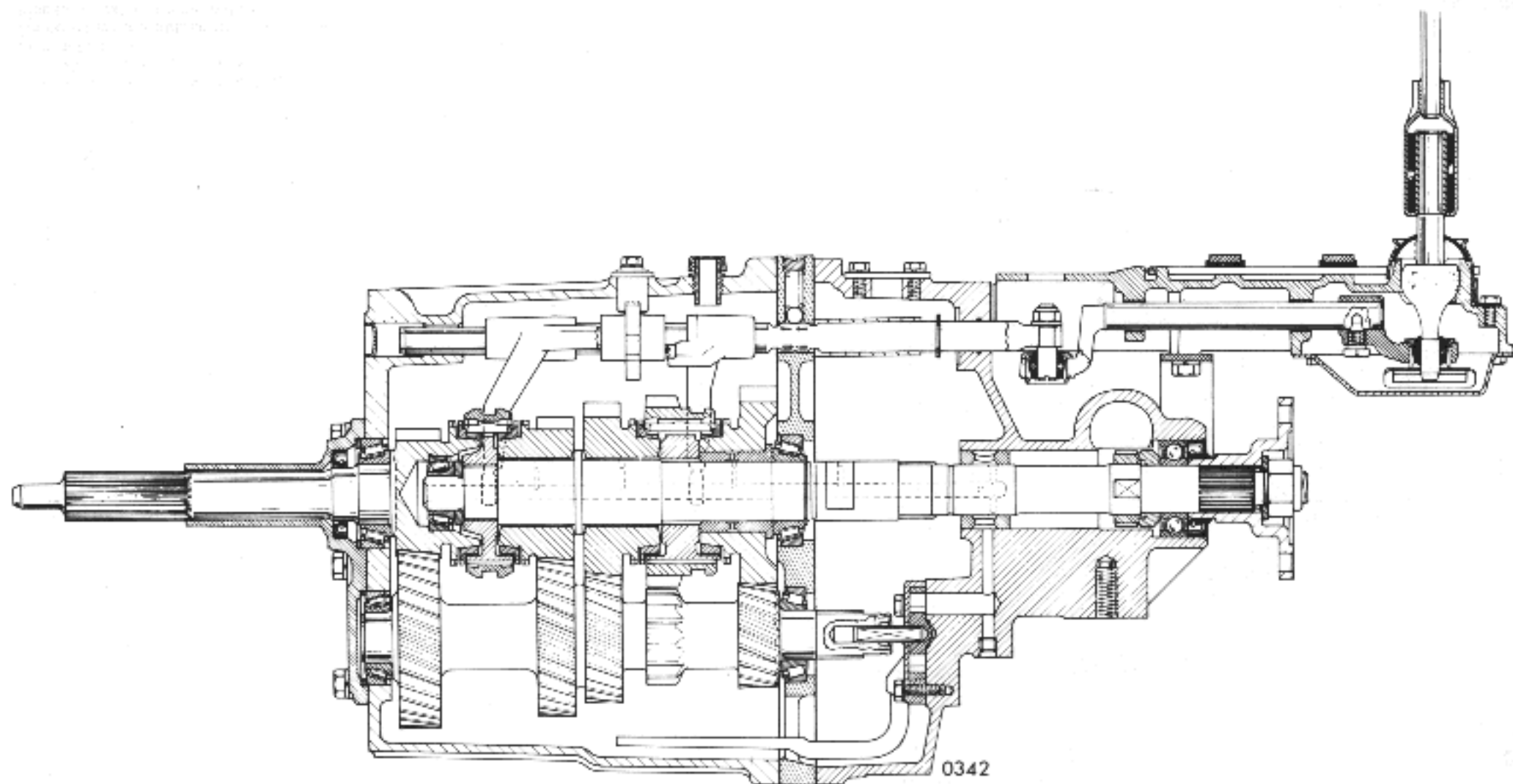
- 26 Fit the relevant ancillary equipment.
- 27 With the gearbox in gear on the unit lift, lift the unit into position and engage the input shaft splines in the clutch.
- 28 Push the gearbox fully into position, reposition the transducer/water rail brackets and fit the three upper securing bolts. Do not tighten the bolts.
- 29 Fit and tighten the dowel bolt and finally tighten the upper securing bolts.
- 30 Remove the unit lift and refit and tighten the five left-hand gearbox to engine securing bolts and nuts.
- 31 Reposition the transducer unit in the clutch housing and fit and tighten the securing bolts.
- 32 Re-align the diagnostic plug bracket and fit and tighten the securing bolts in the clutch housing.
- 33 Reposition the starter motor and engine earth lead and fit and tighten the securing bolts, washers and nuts.
- 34 Refit the speedometer cable and clamp, fit and tighten the clamp bolt.
- 35 Refit the reverse light leads securely in the harness clips and reconnect the leads at the snap connectors.
- 36 Lift the engine into position on the ramp jack.
- 37 Align the rear mounting cross-member and securing plates, fit and tighten the four securing bolts, and check the dimension in operation 12.45.10, instruction 17.
- 38 Lower the engine and remove the jack and wooden block.
- 39 With the gearbox in neutral, connect the propshaft and fit and tighten the four bolts and Nyloc nuts.
- 40 Refit the flywheel cover plate and fit and tighten the three securing bolts.
- 41 Refit and tighten the two bolts and washers securing the sump stiffener plate to the gearbox.



- 5 Remove the nut, washer and bolt securing the exhaust down-pipe to the gearbox extension bracket.
- 6 Remove the three nuts securing the down-pipe to the exhaust manifold flange.

- 42 Reconnect the clutch slave cylinder to the push-rod and fit and tighten the two securing bolts.
- 43 Reposition the exhaust down-pipe and fit and tighten the three securing nuts to the manifold flange.
- 44 Fit and tighten the bolt and nut securing the exhaust down-pipe to the gearbox bracket and finally tighten the down-pipe fixings.
- 45 Lower the vehicle on the ramp.
- 46 Refit the gear-change lever, see 37.16.04.
- 47 Engage reverse gear and check/adjust the operation of the reverse light switch, see 86.65.20.

UNLESS OTHERWISE SPECIFIED,
ALL DIMENSIONS ARE IN INCHES
AND DECIMALS THEREOF.
FRACTIONS SHALL BE IN
EIGHTH, SIXTEENTH, AND
THIRTY-SECOND PARTS OF AN INCH.



GEARBOX — 4-SPEED

GEARBOX ASSEMBLY — 4-Speed

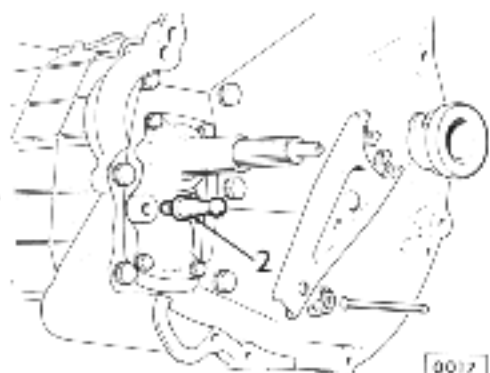
Overhaul

37.20.04

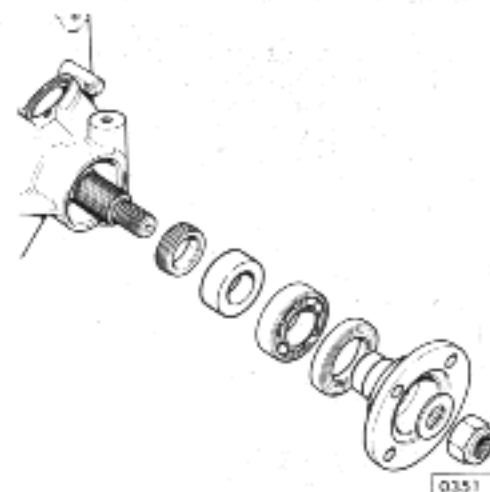
Service tools: 47, 284, RG 421 or 18G 1205, 18G 47-3, LC 370-2, 18G 705 or S 323, 18G 284 AAH, ST 1136

Dismantling

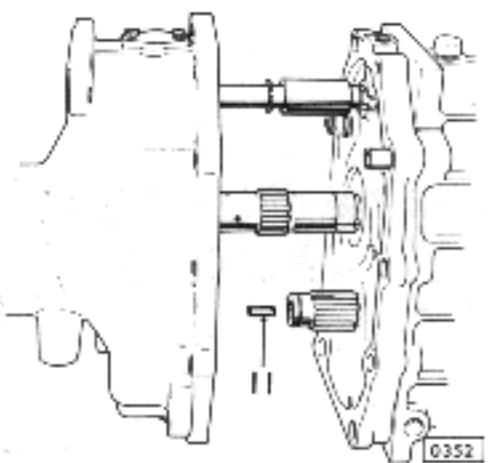
- 1 Place the gearbox on a bench or a gearbox stand, ensuring that the oil is first drained.
- 2 Using tool ST 1136, unscrew the clutch release lever pivot bolt and withdraw the clutch release lever complete with the pivot bolt and release bearing slippers.



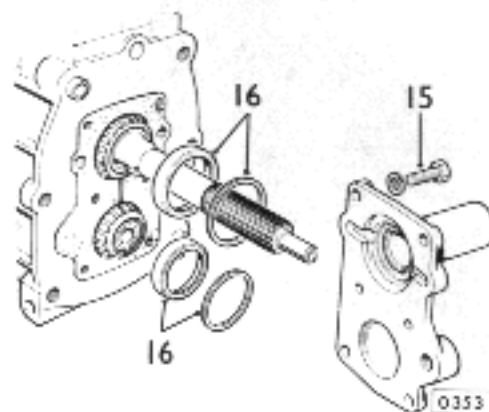
- 3 Detach the release bearing and slippers.
- 4 Remove the six bolts, plain and spring washers securing the bell housing to the gear-case and remove the bell housing.
- 5 Remove the nut and connecting pin linking the selector shaft to the remote control shaft.
- 6 Remove the four bolts, spring and plain washers (two top, one either side) securing the remote control housing to the gear-case rear cover.
- 7 Remove the nut and plain washer securing the drive flange to the mainshaft. Use tool RG 421 or 18G 1205 to prevent shaft rotation.
- 8 Withdraw the driving flange.
- 9 Remove the speedometer driven gear and housing.



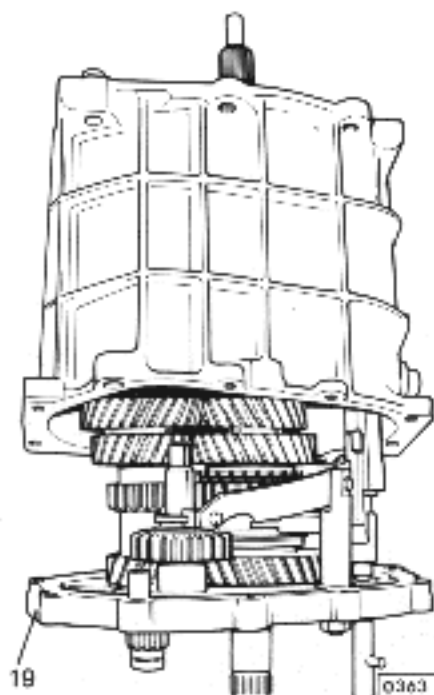
- 10 Remove the ten bolts, spring and plain washers securing the rear cover to the gear-case and withdraw the rear cover and gasket.
- 11 Withdraw the oil pump drive shaft.



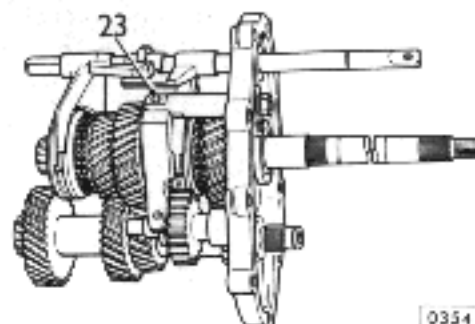
- 12 Remove the circlip from the selector shaft.
- 13 Remove the spacer tube from the selector shaft.
- 14 Remove the spring clip from the mainshaft.
- 15 Remove the front cover and gasket (six bolts and spring washers).



- 16 Remove the input shaft selective washer, bearing track, layshaft selective washer and bearing track from the gear-case.



- 17 Remove the two bolts and spring washers securing the locating boss for the selector shaft front spool and withdraw the locating boss.
- 18 Remove the plug, spring and ball from the centre plate.
- 19 Supporting the gearbox on the centre plate withdraw the gear-case.
- 20 Remove the input shaft and synchro cone.
- 21 Withdraw the layshaft cluster.
- 22 Support the centre plate complete with gears in protected vice jaws.
- 23 Remove the reverse lever, circlip and pivot pin.



- 24 Remove the reverse gear lever and slipper pad.
- 25 Slide the reverse shaft rearwards and withdraw the reverse gear spacer, mainshaft, selector shaft, selector shaft fork and spool in a forward direction clear of the centre plate.
- 26 Withdraw the selector fork and spool.
NOTE: The shorter cam of the spool is fitted towards the bottom of the gearbox.
- 27 Remove the nut and spring washers securing the reverse gear pivot shaft and remove the pivot shaft (only if renewal of the pivot shaft and/or the centre plate is intended).
- 28 Remove the centre plate from the vice and extract the two dowels (only if dowels and/or centre plate renewal is intended).

Input shaft and front cover

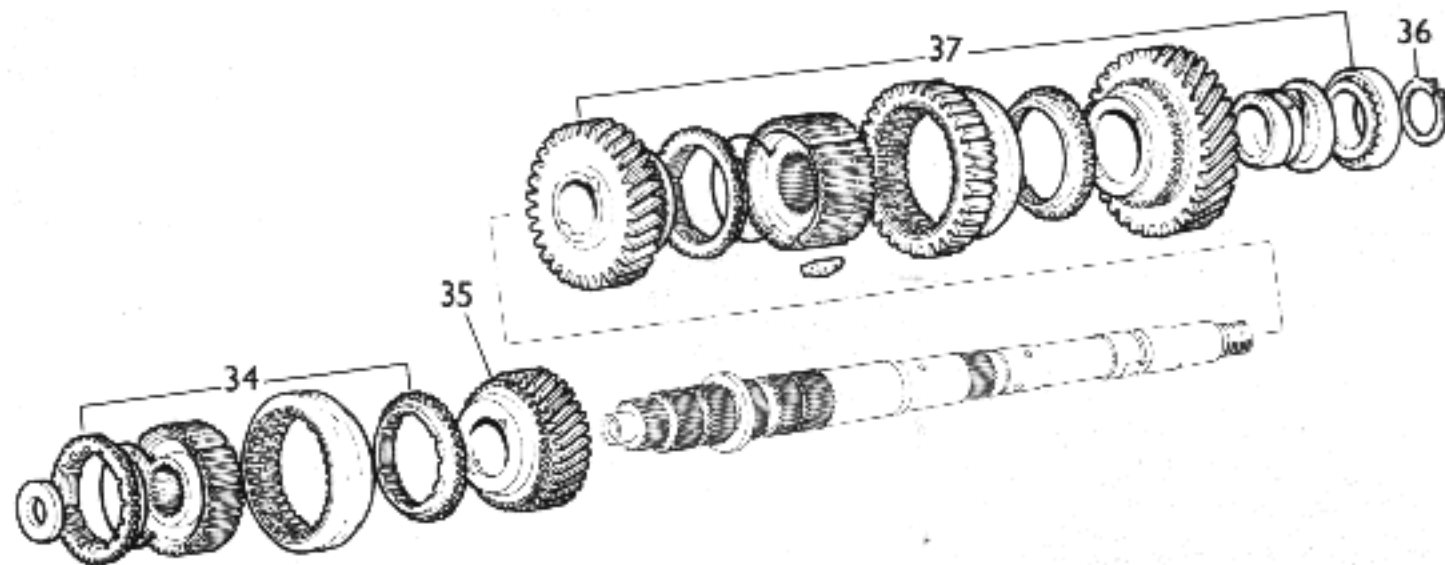
- 29 Using tool 18G 47-3, remove the external bearing.
- 30 Using tools 18G 284 AAH and 284, withdraw the internal bearing track.
- 31 Remove the oil seal from the front cover.

Layshaft

- 32 Using tools LC 370-2, remove the layshaft bearings.

Mainshaft

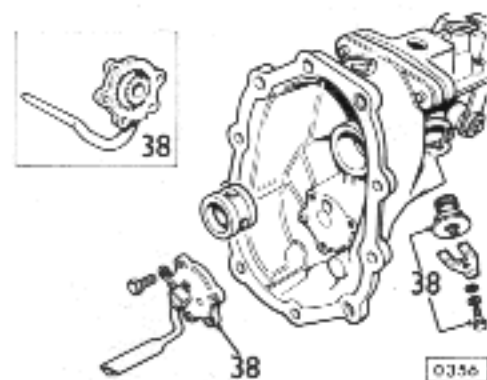
- 33 Remove the pilot bearing and spacer.
- 34 Remove the 3rd and 4th speed synchronizer hub and sleeve.
- 35 Remove the 3rd speed gear.
- 36 Remove the circlip securing the mainshaft bearing.
- 37 Remove the bearing, 1st gear and bush, 1st and 2nd speed hub, sleeve and synchromesh cones, and 2nd gear.



O355

Rear cover

- 38 Remove the oil seal, bearing, speedometer, gear, spacer, and oil sleeve. Remove the oil pump drive, pump cover and gears.
- 39 Thoroughly clean and examine all components. Obtain new parts as necessary.



Layshaft

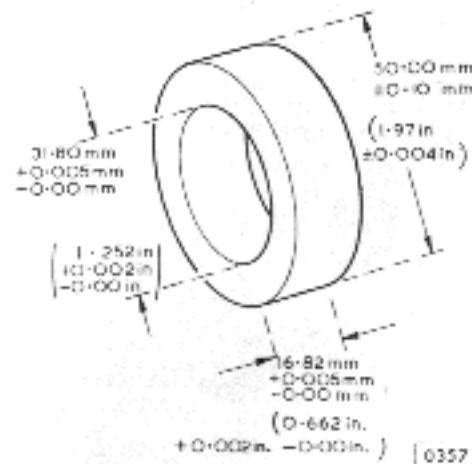
- 40 Fit the bearings to the layshaft.

Mainshaft

- 41 *Synchromesh assemblies.* With the outer sleeve held, a push-through load applied to the outer face of the synchro hub should register 18 to 22 lbf (8.2 to 10 kgf) to overcome spring detent in either direction.

- 42 *Checking 1st speed bush end-float.* Fit 2nd gear, 1st/2nd speed synchro hub and 1st gear bush to the mainshaft. Manufacture a spacer to the dimensions illustrated and slide the spacer on the mainshaft. This represents a slave bearing.

Using an old circlip and feeler gauges check the clearance existing between the spacer and the circlip, which should be within 0.0002 to 0.002 in (0.005 to 0.055 mm). The first speed bush is available with collars of different thickness. Select a 1st speed bush with a collar which will give the required end-float.



- 43 Remove the circlip, spacer, bush, synchro hub and 2nd gear from the mainshaft.

Assembly

- 44 It is important that 1st/2nd synchro is assembled correctly (short splines on inner member towards 2nd gear). Fit 2nd gear, baulk ring which is different to the other three, synchro hub and sleeve (selector fork annulus to the rear of the gearbox), baulk ring, 1st gear and selective bush, bearing and a new circlip. When fitting the circlip care must be taken to ensure that it is not stretched (opened) beyond the minimum necessary to pass over the shaft. The internal diameter of an expanded circlip must not exceed 32.30 mm.

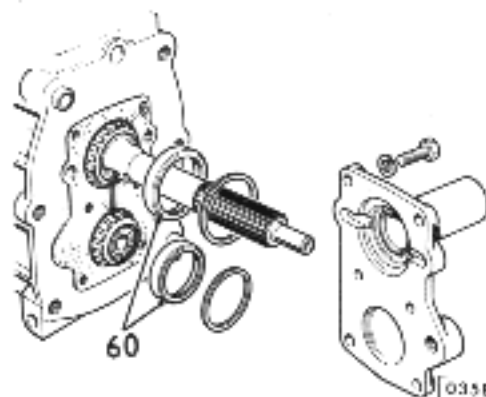
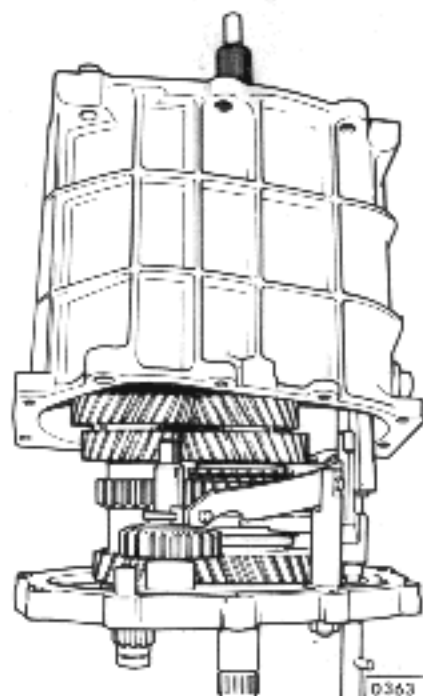
- 45 Fit 3rd gear, baulk ring, and synchro hub and sleeve (longer boss of synchro hub to front of gearbox) to the mainshaft.

- 46 Fit the spacer and bearing to front of the mainshaft.

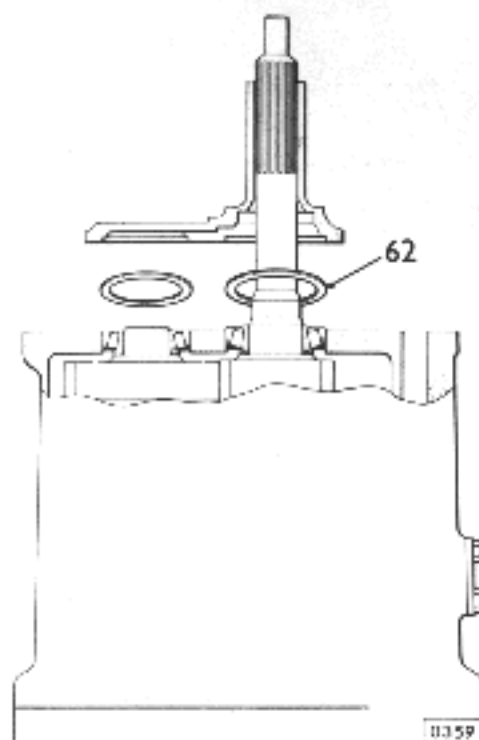
- 47 Fit the mainshaft bearing track to the centre plate.

continued

- 48 Locate the centre plate in protected vice jaws.
- 49 Take the selector shaft complete with 1st and 2nd selector fork, front spool and 3rd and 4th selector fork and engage both forks in their respective synchro sleeves on the mainshaft. Simultaneously engage the selector shaft and mainshaft assemblies in the centre plate.
- 50 Fit the selector shaft ball, spring and plug to the centre plate.
- 51 Fit the layshaft bearing track to the centre plate.
- 52 Fit the layshaft to the centre plate.
- 53 Fit the reverse gear (lip for slipper pad to front of box), front and rear spacers and the reverse shaft.
- 54 Fit the reverse lever, slipper pad, pivot pin and circlip. If a new reverse gear pivot shaft is to be fitted it is necessary to ensure that its radial location is consistent with reverse pad slipper engagement/clearance. Radial location is determined on assembly. Secure with spring washer and nuts, subsequently checking movement of reverse lever and ensuring slipper pad is properly engaged.
- 55 Remove the centre plate and gear assembly from the vice and locate on a suitable stand with the front of the mainshaft vertically uppermost. Ensure that the reverse shaft does not slide out of position.
- 56 Fit the centre plate front gasket.
- 57 Fit the external bearing and internal bearing track to the input shaft.
- 58 Fit the input shaft to the gear-case.
- 59 Carefully slide the gear-case and input shaft into position over the gear assemblies. Do not use force. Ensure that the centre plate dowels and selector shaft are engaged in their respective locations.
- 60 Fit the layshaft and input shaft front bearing outer tracks.
- 61 Using slave bolts and plain washers to prevent damaging the rear face of the centre plate, evenly draw the gear-case into position on the centre plate.



- 62 Place a layshaft spacer of nominal thickness 0.040 in (1.02 mm) on the layshaft bearing track, fit the front cover and gasket, securing with six bolts.

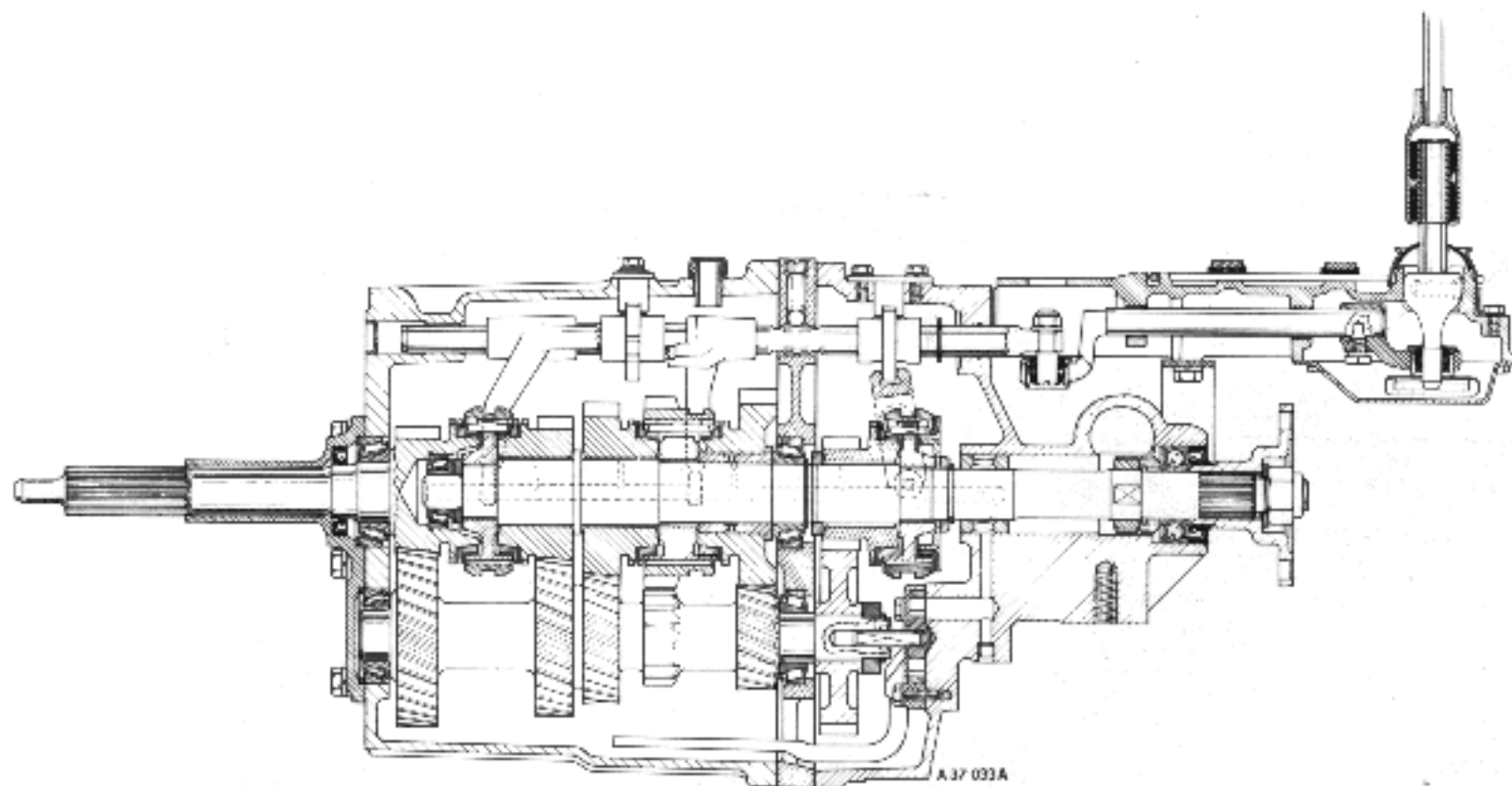
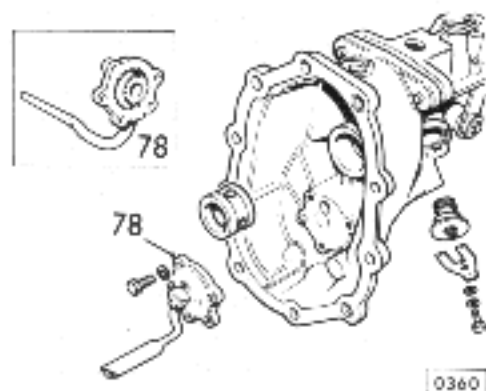


- 63 Using a dial gauge, check layshaft end-float.
- 64 Remove the front cover and provisional spacer. The required layshaft end-float is 0.0002 to 0.002 in (0.005 to 0.055). Check the thickness of the provisional spacer. Spacer thickness required is: provisional spacer thickness, plus end-float obtained, minus 0.002 in (0.055 mm).
- 65 Again fit the front cover and gasket, this time with the correct spacer arrived at in instruction 64.
- 66 Check layshaft end-float to ensure it is within the limits specified in instruction 64.

- 67 Place a ball bearing in the centre of the input shaft. This facilitates checking mainshaft end-float using a dial gauge.
- 68 Mount the dial gauge on the gear-case with the stylus resting on the ball. Zero the gauge.
- 69 Check the mainshaft and input shaft combined end-float. Care must be taken when checking dial gauge readings to ensure that end-float only — as distinct from side movement of the input shaft — is recorded. If difficulty is encountered in differentiating between end-float and side movement, remove the front cover and wrap the plain portion of the input shaft below the splines with six turns of masking tape. Refit the front cover and again check end-float ensuring that rise and fall of the input shaft is not restricted by the tape.
- 70 Having ascertained end-float, select the spacer required as follows:
End-float minus 0.002 in (0.055 mm) = spacer thickness required.
Fit the spacer thus determined and again check end-float which must be within 0.0002 to 0.002 in (0.005 to 0.055 mm).
- 71 Remove the front cover and tape (if employed).
- 72 Fit the oil seal to the front cover and lubricate the seal lips.
- 73 Mask the splines and fit the front cover. Remove the spline masking.
- 74 Place the gearbox on a bench or stand and remove the slave bolts and washers from the centre plate.
- 75 Fit the spring clip to the mainshaft ensuring that the tag is located in the oil drilling on the shaft.
- 76 Renew the selector shaft 'O' ring in the rear cover and fit the oil ring bush.
- 77 Fit the rear gasket to the centre plate and engage the oil pump shaft in the layshaft.

continued

- 78 Fit the oil pump gears and cover to the gearbox rear cover.
- 79 Fit the rear cover ensuring that the oil pump shaft engages the oil pump.
- 80 Fit the spool locating boss to the 1st/2nd spool.
- 81 Fit the speedometer driving gear to the mainshaft ensuring that it properly engages the mainshaft flats.
- 82 Fit the spacer and ball race to the mainshaft.
- 83 Fit the rear oil seal, lubricate the seal lip.
- 84 Fit the driving flange, washer and nut.
- 85 Fit the speedometer driven gear and housing.
- 86 Fit the bell housing.
- 87 Fit the clutch release bearing and withdrawal lever.
- 88 Fit the remote control housing, see 37.16.19.



GEARBOX — 5-SPEED

GEARBOX ASSEMBLY — 5-SPEED

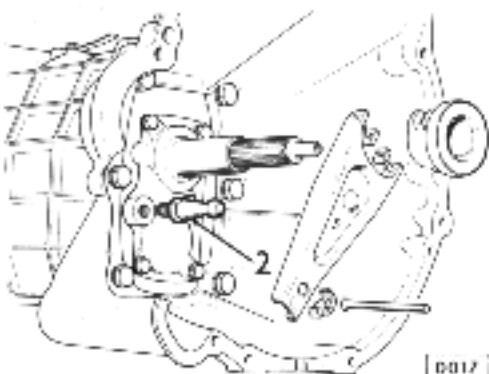
Overhaul

37.20.04

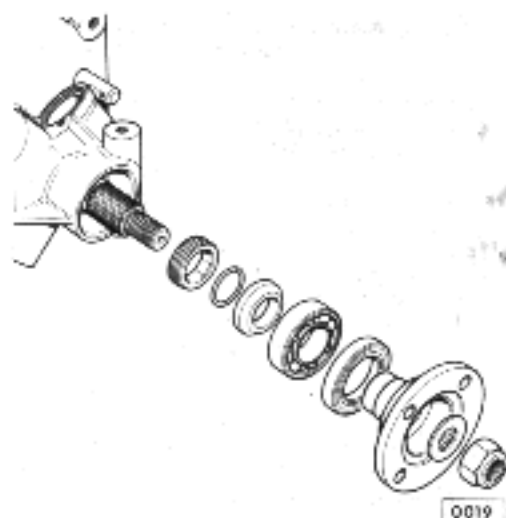
Service tools: 47, 284, 18G 705-1, RG 421 or 18G 1205, RTR 47-23, LC 370-2, 18G 705 or S323, 18G 284, AAH, ST 1136

Dismantling

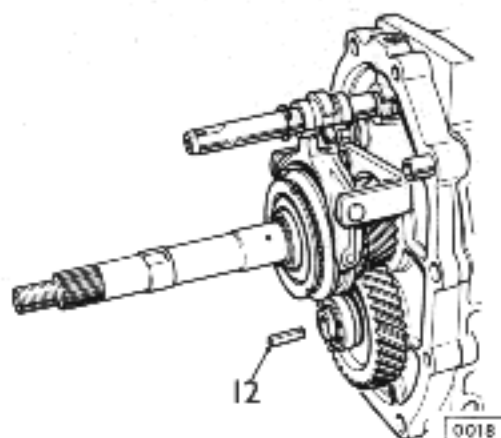
- 1 Place the gearbox on a bench or a gearbox stand ensuring that the oil is first drained.



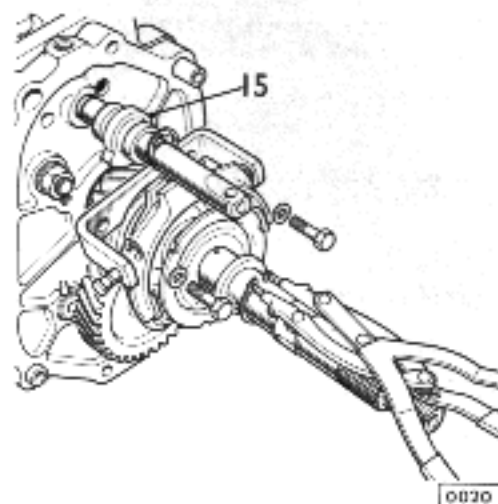
- 2 Using tool ST 1136, unscrew the clutch release pivot bolt and withdraw the clutch release lever complete with pivot bolt and release bearing slippers.
- 3 Detach the release bearing and slippers.
- 4 Remove the six bolts, plain and spring washers securing the bell housing to the gearcase and remove the bell housing.
- 5 Remove the nut and connecting pin linking the selector shaft to the remote control shaft.
- 6 Remove the four bolts, spring and plain washers (2 top, 1 either side) securing the remote control housing to the gearcase rear cover.
- 7 Remove the nut and plain washer securing the drive flange to the mainshaft. Use tool RG 421 or 18G 1205 to prevent shaft rotation.
- 8 Withdraw the driving flange.



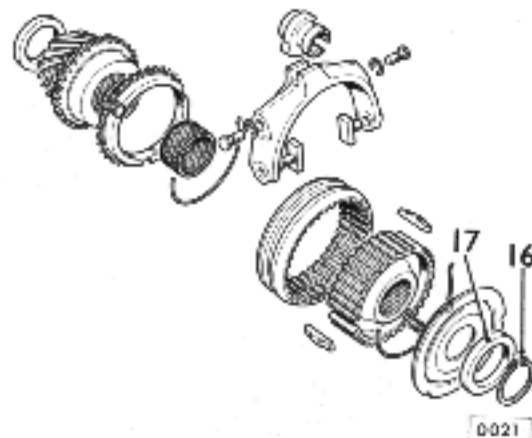
- 9 Remove the speedometer driven gear and housing.
- 10 Remove the two bolts and spring washers securing the locating boss for the selector rear spool and withdraw the locating boss.
- 11 Remove the ten bolts, spring and plain washers securing the rear cover to the gearcase and withdraw the rear cover and gasket.



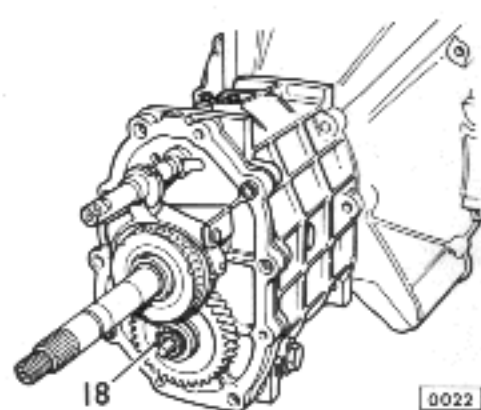
- 12 Withdraw the oil pump drive shaft.
- 13 Remove the fifth gear selector fork and bracket (two bolts and spring washers).



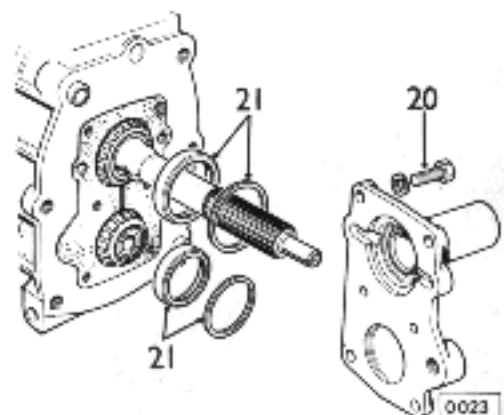
- 14 Remove the circlip from the selector shaft.
- 15 Withdraw the fifth gear selector spool. Note that the longer cam of the spool is fitted towards the bottom of the gearbox.
- 16 Remove the circlip retaining the fifth gear synchro assembly to the mainshaft.



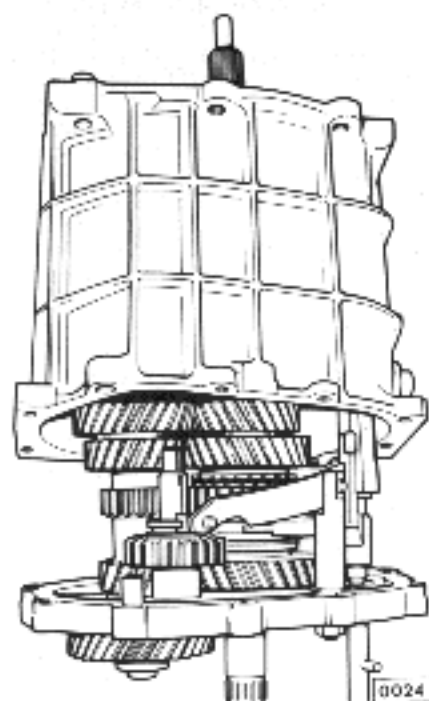
- 17 Withdraw the synchro assembly, fifth gear (driven) and spacer from the mainshaft.



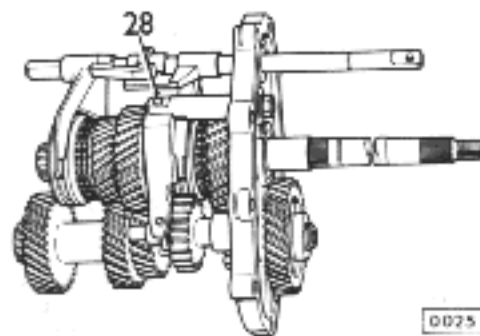
- 18 Remove the circlip retaining the fifth gear (driving) from the layshaft.
- 19 Using tool 18G 705 and adaptors 18G 705-1 remove the fifth gear and spacer from the layshaft.



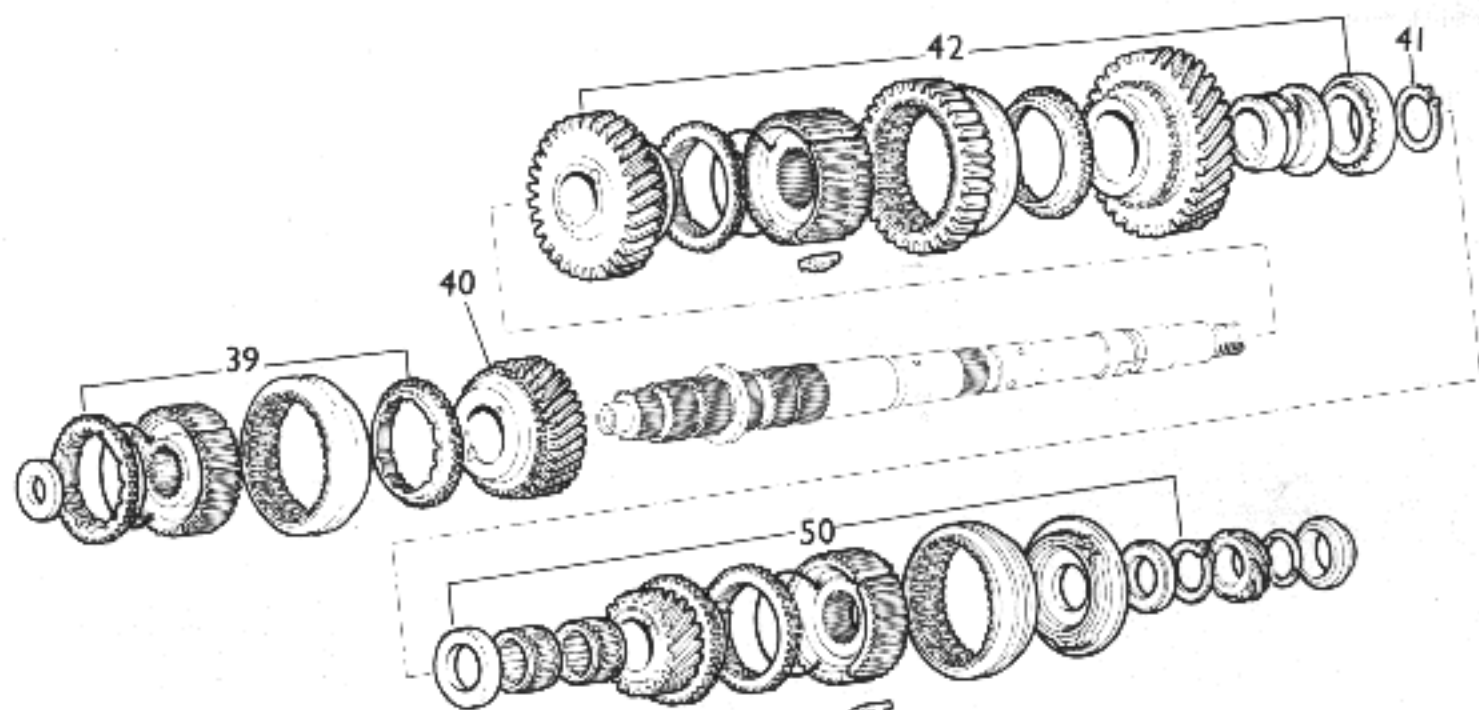
- 20 Remove the front cover and gasket (six bolts and spring washers).
- 21 Remove the input shaft selective washer, bearing track, layshaft selective washer and bearing track from the gearcase.
- 22 Remove the two bolts and spring washers securing the locating boss for the selector shaft front spool and withdraw the locating boss.
- 23 Remove the selector plug, spring and ball from centre plate.



- 24 Supporting the gearbox on the centre plate withdraw the gearcase.
- 25 Remove the input shaft and 1st gear synchro cone.
- 26 Withdraw the layshaft cluster.



- 27 Support the centre plate complete with gears in protected vice jaws.
- 28 Remove the reverse lever pivot pin circlip and pivot pin.



- 29 Remove the reverse lever and slipper pad.
- 30 Slide the reverse shaft rearwards and withdraw the reverse gear spacer, mainshaft, selector shaft, selector shaft fork and spool in a forward direction clear of the centre plate.
- 31 Withdraw the selector fork and spool. Note that the shorter cam of the spool is fitted towards the bottom of the gearbox.
- 32 Remove the nut and spring washers securing the reverse gear pivot shaft and remove the pivot shaft (only if renewal of the pivot shaft and/or the centre plate is intended).
- 33 Remove the centre plate from the vice and extract the two dowels (only if dowels and/or centre plate renewal is intended).

Input shaft and front cover

- 34 Using tool RTR 47-23, remove the external bearing.

- 35 Using tools 18G 284 AAH and 284 withdraw the internal bearing track.
- 36 Remove the oil seal from the front cover.

Layshaft

- 37 Using tools LC 370-2, remove the layshaft bearings.

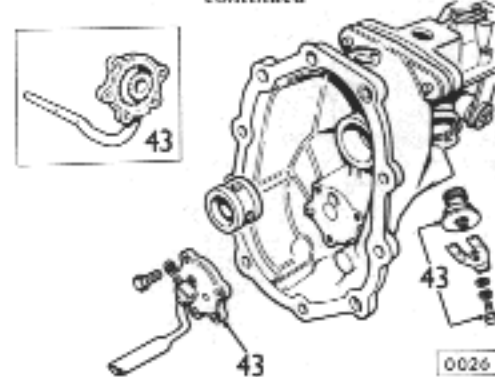
Mainshaft

- 38 Remove the pilot bearing and spacer.
- 39 Remove the 3rd and 4th speed synchroniser hub and sleeve.
- 40 Remove the 3rd speed gear.
- 41 Remove the circlip securing the mainshaft bearing.
- 42 Remove the bearing, 1st gear and bush, 1st and 2nd speed hub, sleeve and synchro-mesh cones, and 2nd gear.

Rear cover

- 43 Remove the oil seal, bearing, speedo gear, circlip and sleeve and oil sleeve. Remove the oil pump drive, pump cover and gears.
- 44 Thoroughly clean and examine all components. Obtain new parts as necessary.

continued

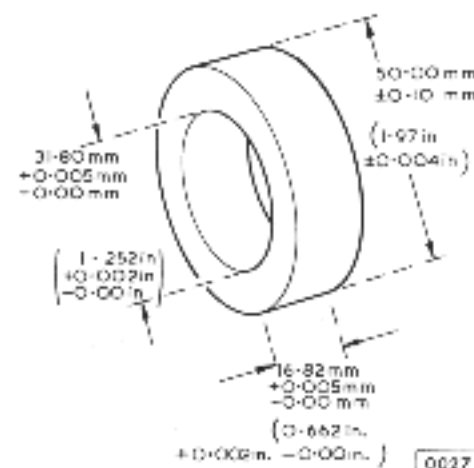


Layshaft

- 45 Fit the bearings to the layshaft.

Mainshaft

- 46 **Synchro assemblies.** With the outer sleeve held, a push-through load applied to the outer face of the synchro hub should register 18.2 to 10 kgf (18 to 22 lbf) to overcome spring detent in either direction.
- 47 **Checking 1st speed bush end-float.** Fit 2nd gear, 1st/2nd speed synchro hub and 1st gear bush to the mainshaft. Manufacture a spacer to the dimensions illustrated and slide the spacer on the mainshaft.



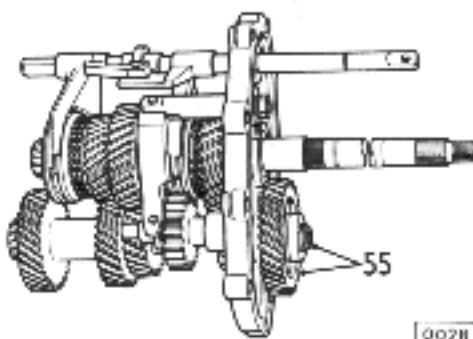
Using an oil circlip and feeler gauges check the clearance existing between the spacer and the circlip, which should be within 0.005 to 0.055 mm (0.0002 to 0.002 in). The first speed bush is available with collars of different thickness. Select a 1st speed bush with a collar which will give the required end-float.

- 48 Remove the circlip, spacer, bush, synchro hub and 2nd gear from the mainshaft.

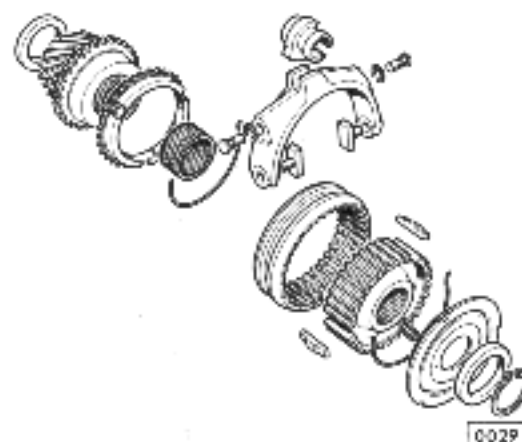
- 49 **Checking 5th gear end-float.** Fit the 5th gear assembly to the mainshaft, i.e. front spacer, 5th gear, synchro hub, rear plate and spacer. Fit an old circlip and using feeler gauges check the end-float which should be within 0.005 to 0.055 mm (0.0002 to 0.002 in). The rear spacer is available in a range of sizes. Select a rear spacer which will ensure the required clearance.
- 50 Remove the circlip spacer and 5th gear assembly.

Assembly

- 51 It is important that 1st/2nd synchro is assembled correctly (short splines on inner member) towards 2nd gear. Fit 2nd gear, baulk ring, synchro hub and sleeve (selector fork annulus to rear of gearbox), baulk ring, 1st gear and selective bush, bearing and a new circlip. When fitting the circlip care must be taken to ensure that it is not stretched (opened) beyond the *minimum* necessary to obtain entry over the shaft. The internal diameter of an expanded circlip *must not* exceed 32.30 mm.
- 52 Fit 3rd gear, baulk ring, and synchro hub and sleeve (longer boss of synchro hub to front of gearbox) to the mainshaft.
- 53 Fit the spacer and bearing to front of mainshaft.
- 54 Fit the layshaft bearing track to the centre plate.



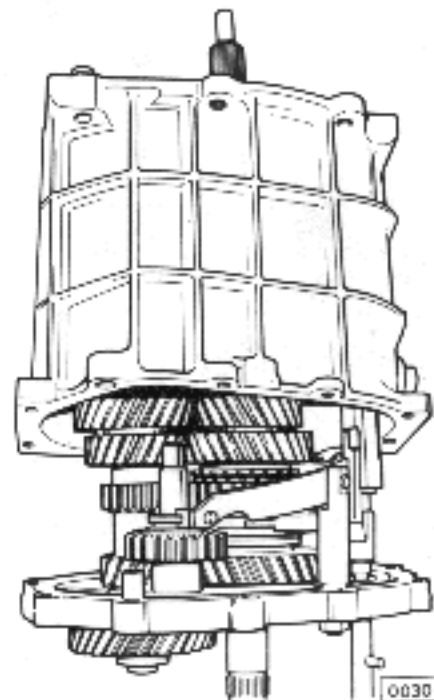
- 55 Fit the layshaft to the centre plate and fit the fifth gear, spacer and a new circlip. When fitting the circlip care must be taken to ensure that it is not stretched (opened) beyond the *minimum* necessary to obtain entry. The internal diameter of an expanded circlip *must not* exceed 22.5 mm.
- 56 Fit the mainshaft bearing track to the centre plate.
- 57 Locate the centre plate in protected vice jaws.
- 58 Take the selector shaft complete with 1st and 2nd selector fork, front spool and 3rd and 4th selector fork and engage both forks in their respective synchro sleeves on the mainshaft. Simultaneously engage the selector shaft and mainshaft assemblies in the centre plate.



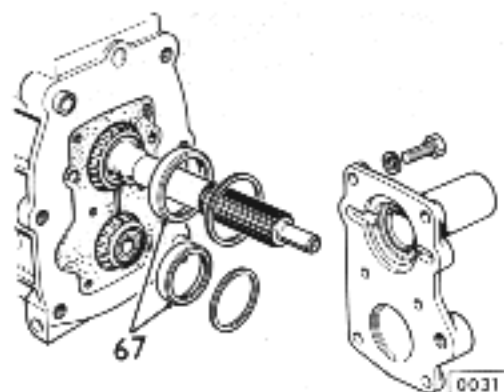
- 59 Fit the spacer, 5th gear, baulk ring, synchro hub and sleeve end-plate, selective spacer (instruction 48), and a new circlip. When fitting the circlip care must be taken to ensure that it is not stretched (opened) beyond the *minimum* necessary to obtain entry. The internal diameter of an expanded circlip *must not* exceed 27.63 mm.
- 60 Fit the reverse gear (lip for slipper pad to front of box) front and rear spacers and the reverse shaft.
- 61 Fit the reverse lever, slipper pad, pivot pin and circlip. If a new reverse gear pivot shaft is to be fitted it is necessary to ensure

that its radial location is consistent with reverse pad slipper engagement/clearance. Radial location is determined on assembly. Secure with spring washer and nuts, subsequently checking movement of reverse lever and ensuring slipper pad is properly engaged.

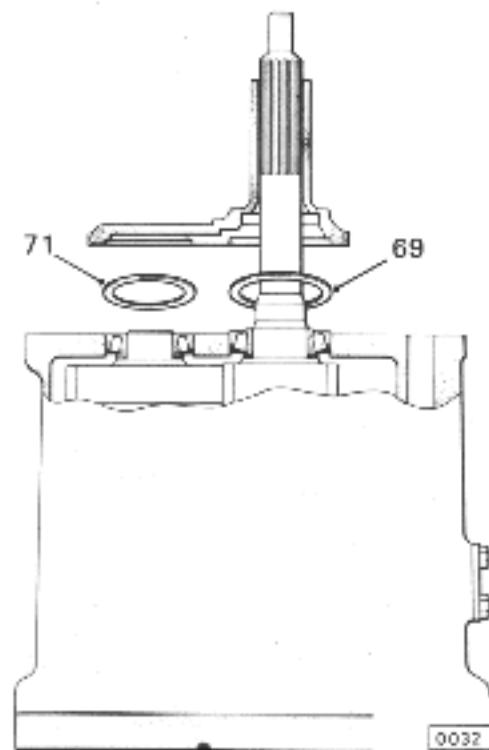
- 62 Remove the centre plate and gear assembly from the vice and locate on a suitable stand with the front of the mainshaft vertically uppermost. Ensure that the reverse shaft does not slide out of position.
- 63 Fit the centre plate front gasket.
- 64 Fit the external bearing and internal bearing track to the input shaft.
- 65 Fit the input shaft to the gearcase.



- 66 Carefully slide the gearcase and input shaft into position over the gear assemblies. Do not use force. Ensure that the centre plate dowels and selector shaft are engaged in their respective locations.

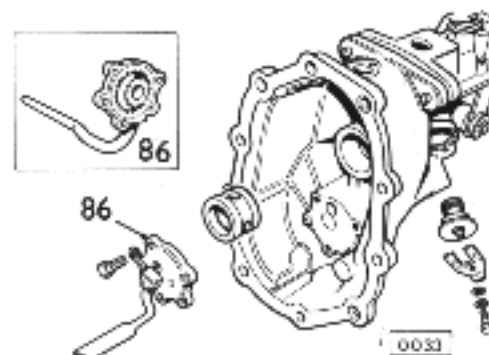


- 67 Fit the layshaft and input shaft bearing outer tracks.
- 68 Using seven bolts and plain washers to prevent damaging the rear face of the centre plate evenly draw the gearcase into position on the centre plate.



- 69 Place a layshaft spacer of nominal thickness 1.02 mm (0.040 in), on the layshaft bearing track, and fit the front cover and gasket, securing with six bolts.
- 70 Using a dial gauge check layshaft end-float.
- 71 Remove the front cover and provisional spacer. Shimming should be such that a pre-load of 0.025 to 0.05 mm (0.001 to 0.002 in) is obtained. Spacer thickness required is: provisional spacer thickness, plus end-float obtained on check, plus pre-load requirement.
- 72 Again fit the front cover and gasket, this time with the correct spacer arrived at in instruction 71.
- 73 Check layshaft end-float to ensure it is within the limits specified in instruction 71.
- 74 Place a ball bearing in the centre of the input shaft. This facilitates checking mainshaft end-float using a dial gauge.
- 75 Mount the dial gauge on the gearcase with the stylus resting on the ball. Zero the gauge.
- 76 Check the mainshaft and input shaft combined end-float. Care must be taken when checking dial gauge readings to ensure that end-float only—as distinct from side movement of the input shaft—is recorded. If difficulty is encountered in differentiating between end-float and side movement remove the front cover and wrap the plain portion of the input shaft below the splines with six turns of masking tape. Refit the front cover and again check end-float ensuring that rise and fall of the input shaft is not restricted by the tape.
- 77 Having ascertained end-float select the spacer required as follows:
End-float minus 0.055 mm (0.002 in)—spacer thickness required. Fit the spacer thus determined and again check end-float which must be within 0.005 to 0.055 mm (0.0002 to 0.002 in).
- 78 Remove the front cover and tape (if employed).
- 79 Fit the oil seal to the front cover and lubricate the seal lips.
- 80 Mask the splines and fit the front cover. Remove the splines masking.
- 81 Place the gearbox on a bench or stand and remove the slave bolts and washers from the centre plate.

- 82 Fit the 5th gear spool and circlip to the selector shaft.
- NOTE:** The longer cam of the spool is fitted towards the bottom of the gearbox.
- 83 Fit the 5th gear selector fork and bracket.
- 84 Renew the selector shaft 'O' ring in the rear cover and fit the oil ring bush.
- 85 Fit the rear gasket to the centre plate and engage the oil pump shaft in the layshaft.



- 86 Fit the oil pump gears and cover to the gearbox rear cover.
- 87 Fit the rear cover ensuring that the oil pump shaft engages the oil pump.
- 88 Fit the selector shaft ball, spring and plug to the centre plate.
- 89 Fit the spool locating bosses (2) to the 1st/2nd spool and 5th gear spool.
- 90 Fit the speedometer driving gear to the mainshaft ensuring that it properly engages the mainshaft flats.
- 91 Fit the circlip and sleeve and ball race to the mainshaft.
- 92 Fit the rear oil seal. Lubricate seal lip.
- 93 Fit the driving flange, washer and nut.
- 94 Fit the speedometer driven gear and housing.
- 95 Fit the bell housing.
- 96 Fit the clutch release bearing and withdrawal lever.
- 97 Fit the remote control housing.

FIRST MOTION SHAFT OIL SEAL

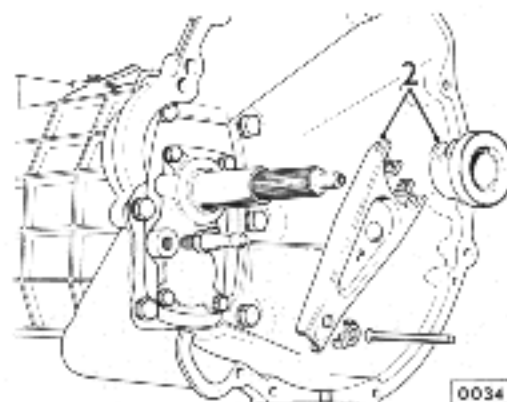
Remove and refit

37.23.04

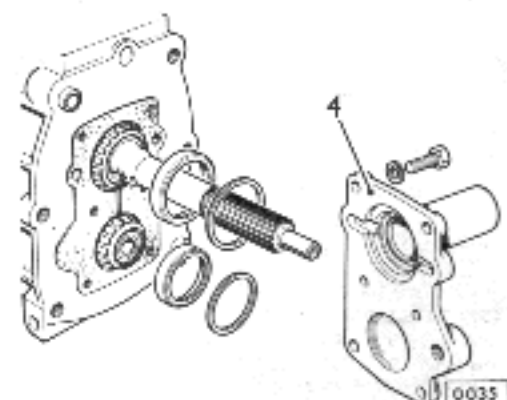
Service tools: ST 1136

Removing

- 1 Remove the gearbox, see 37.20.01.



- 2 Using tool ST 1136, remove the clutch release fork and bearings.
- 3 Remove the bolts and washers securing the front cover to the gearbox.
- 4 Remove the front cover and gasket.



- 5 Remove the oil seal from the front cover. Ensure that the spacers for the first motion shaft and layshaft bearings are not intermixed.

continued

Refitting

- 6 Fit a new oil seal to the front cover (seal lip towards gearbox).
- 7 Lubricate the oil seal and fit the front cover and gasket.
- 8 Fit the clutch release fork and bearing.
- 9 Fit the gearbox to the car, see 37.20.01.

SPEEDOMETER DRIVE GEAR

Remove and refit **37.25.01**

As Operation 37.12.42.

**SPEEDOMETER DRIVE PINION**

Remove and refit **37.25.05**

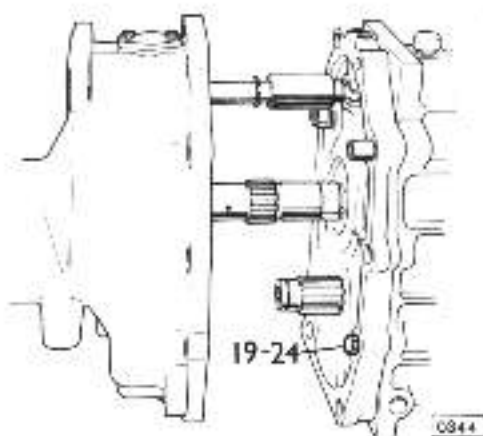
Removing

- 1 Remove the bolt and washer securing the speedometer clamp plate.
- 2 Release the speedometer cable from the drive pinion.
- 3 Withdraw the pinion housing and pinion from the gearbox.
- 4 Remove the pinion from the housing.

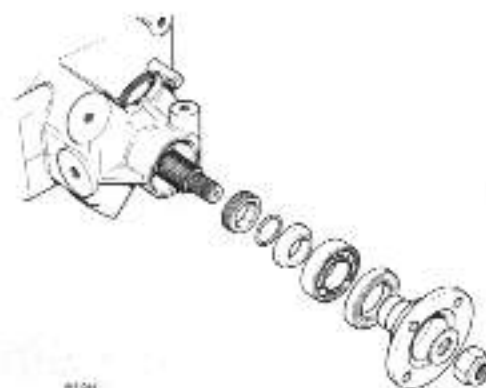
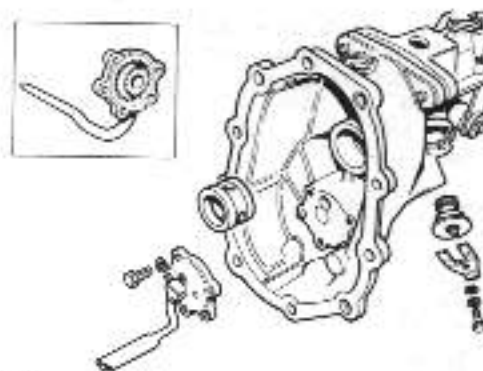
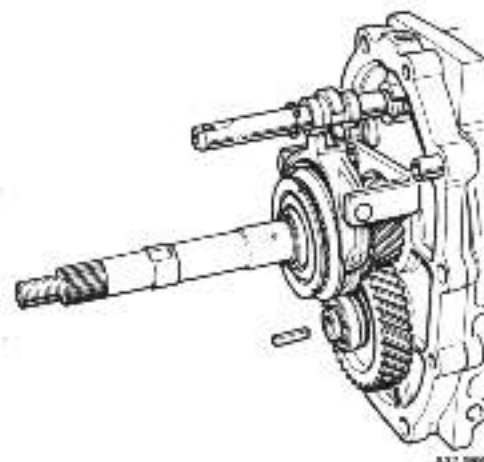
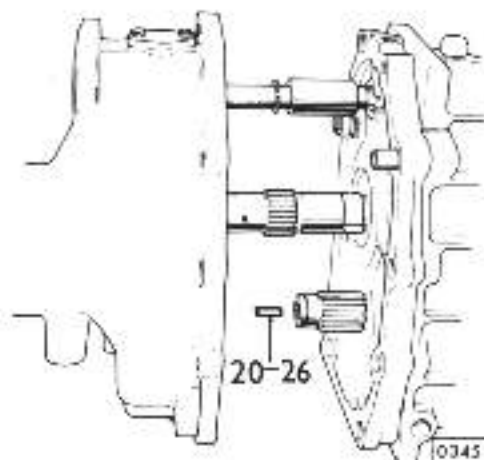
Refitting

- 5 Reverse instructions 1 to 4. Renew the pinion housing 'O' ring if necessary.

- 18 Withdraw the rear cover and gasket ensuring that the centre plate is not disturbed.
19 Fit temporary slave bolts to retain the centre plate in position.



- 20 Remove the oil pump drive shaft.
21 Remove the rear oil seal, bearing, spacer, ring and speedometer driving gear from the rear cover.



Refitting

- 22 Remove the slave bolts from the gearbox centre plate.
23 Ensure that the centre plate and rear cover mating faces are clean and fit a new gasket to the centre plate.
24 Engage the oil pump drive shaft in the layshaft.
25 Note the radial relationship of the square oil pump drive and align the oil pump gear centre.
26 Offer up the rear cover to the gearbox mainshaft and slide carefully into position. Ensure that the oil pump shaft engages the oil pump.
27 Fit and tighten the rear cover securing bolts.
28 Fit the speedometer driving gear ensuring that it properly engages the flats on the mainshaft and that the tapered lead of the gears is to the rear.
29 Fit the circlip and the spacer (machined recess in spacer towards the circlip).
30 Fit the rear bearing.

- 31 Fit a new oil seal. Lubricate the seal lip.
32 Lubricate the seal contact area on the driving flange and fit the flange, washer and nut.
33 5-speed only: Fit the 5th gear spool locating boss.
34 Fit the pin, washer and nut securing the remote control linkage to the gearbox selector rod. Connect the reverse switch lead.
35 Raise the jack supporting the engine and bolt the gearbox cross-member to the body.
36 Remove the engine jack.
37 Connect the propeller shaft to the gearbox.
38 Refit the exhaust system and the resonator or catalyst, connect the lambda sensor as applicable.
39 Fit and tighten the gearbox drain plug. Refill the gearbox with fresh oil.
40 Lower the car.
41 Fit the gear lever.
42 Connect the battery.

OIL PUMP

Remove and refit

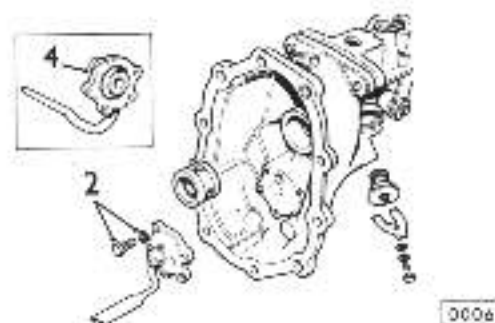
37.12.47

Removing

- 1 Remove the rear cover, see 37.12.42.
- 2 Remove the four bolts and spring washers securing the oil pump cover to the gearbox rear cover.
- 3 Withdraw the oil pump cover and oil intake pipe.
- 4 Remove the internal and external toothed gears.

Refitting

- 5 Reverse instructions 1 to 4.

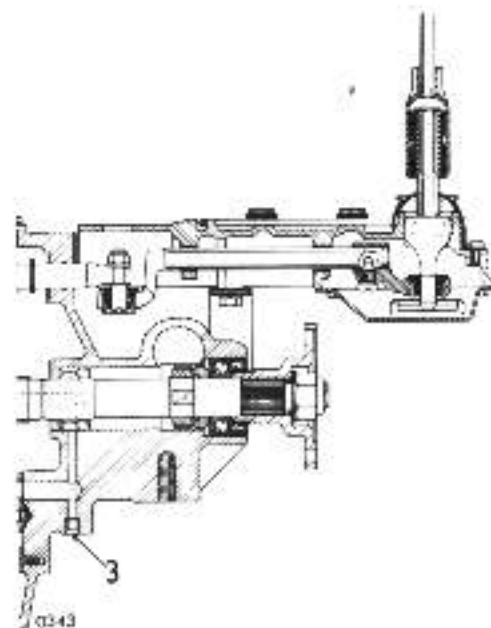


OIL PUMP

Test

37.12.50

- 1 Ensure that the gearbox oil level is correct.
- 2 Start the engine and allow to idle.
- 3 Remove the threaded plug in the rear cover; a steady flow of oil should be expelled.
- 4 Switch off the engine.
- 5 Prime the plug with Locquic Primer Grade 'T', then applying Loctite 270 immediately prior to assembly, refit the threaded plug.
- 6 Check and top-up the gearbox oil level.



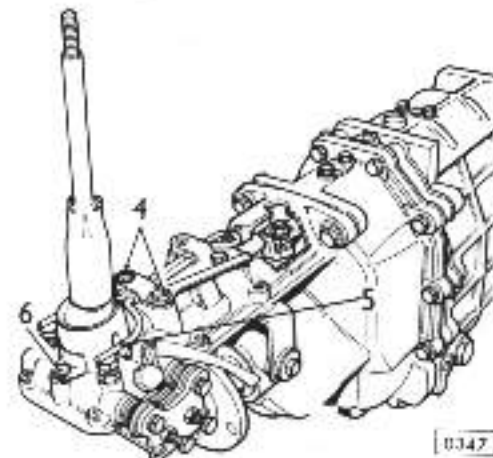
GEAR-CHANGE LEVER

Remove and refit

37.16.04

Removing

- 1 Select neutral and unscrew and remove the gear-lever knob.
- 2 Unclip and remove the gear-lever gaiter and panel assembly.
- 3 Remove the draught excluder grommet.
- 4 Remove the countersunk screw and bolt securing the bias spring rear bridge clamp and withdraw the bridge and liner.
- 5 Carefully prise the bias spring legs clear of the gear lever pins.
NOTE: Under no circumstances should the bias spring legs be prised clear unless the bridge clamp nearest to the gear-change lever or both securing clamps are first removed. Any other mode of action will affect the bias action of the spring.



Refitting

- 8 Locate the anti-rattle spring and nylon plunger with grease and grease all working surfaces.
- 9 Reverse instructions 1 to 7.

GEAR-CHANGE REMOTE CONTROL ASSEMBLY

Remove and refit

37.16.19

Removing

- 1 Drive the vehicle onto a ramp.
- 2 Remove the gear-change lever, see 37.16.04.
- 3 Raise the ramp.
- 4 Disconnect the reverse light switch leads at the snap connectors and release the harness from the gearbox.
- 5 Remove the four bolts and washers securing the remote control assembly to the rear extension housing.
- 6 Carefully manoeuvre the remote control to disengage the pin in the selector rod and lift the unit from the gearbox.

Refitting

- 7 Manoeuvre the remote control assembly to locate on the pin on the selector rod and secure to the gearbox with the four bolts and plain washers.
- 8 Reconnect the harness to the gearbox and connect the reverse light switch leads at the snap connectors.
- 9 Lower the ramp.
- 10 Refit the gear-change lever, see 37.16.04.

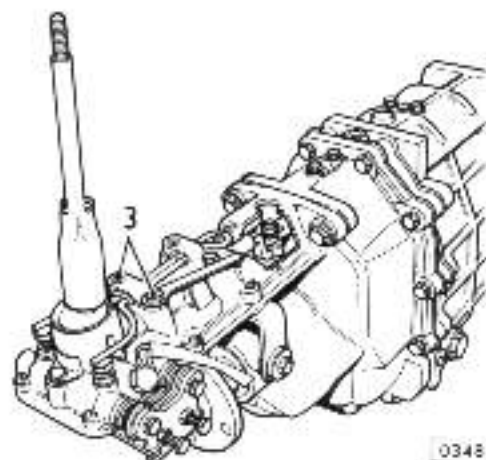
GEAR-CHANGE REMOTE CONTROL ASSEMBLY

Overhaul

37.16.20

Dismantling

- 1 Remove the remote control assembly from the gearbox, see 37.16.19.
- 2 Remove the two bolts and two counter-sunk screws securing the bias spring bridge plates.

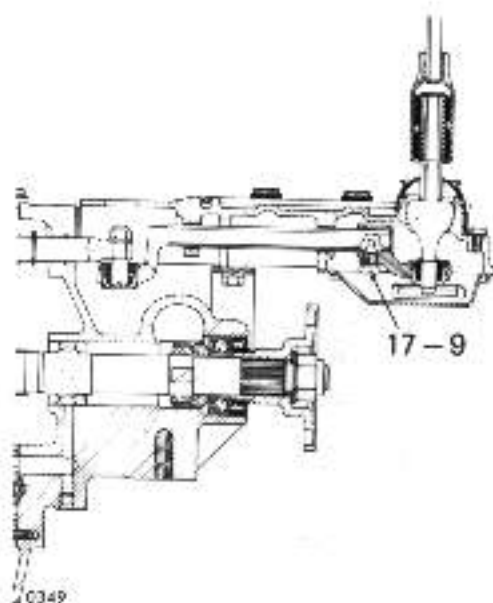


- 3 Remove the two bridge plates, bridge plate liners and the bias spring.
- 4 Remove the bias spring adjusting bolts and locknuts.
- 5 Remove the two bolts and washers securing the reverse baulk plate assembly and withdraw the reverse baulk plate, springs and spacers.
- 6 Remove the four bolts and washers securing the bottom cover plate.
- 7 Remove the bottom cover plate.
- 8 Remove the reverse light switch and locknut.
- 9 Remove the square-headed pinchbolt securing the selector shaft yoke.
- 10 Remove the selector shaft yoke.
- 11 Withdraw the selector shaft.
- 12 Press out the two selector shaft bushes in the remote control casing.

- 13 Remove the circlips securing the pivot ball and bushes in the selector shaft yokes and press out the bushes and pivot balls.

Assembling

- 14 Press in new selector shaft bushes in the remote control casing.
- 15 Fit new bushes, pivot balls and circlips to the selector shaft yoke.
- 16 Fit the selector shaft to the casing.
- 17 Fit the rear yoke and secure with the square-headed pinchbolt.



- 18 Fit the baulk plate assembly.
- 19 Fit the reverse switch and locknut.
- 20 Fit the bottom cover-plate.
- 21 Fit the bias spring adjusting bolts and locknuts.
- 22 Fit the bias spring, bridge plate liners and bridge plates.

- 23 Fit the remote control assembly to the gearbox.

NOTE: The following operations to be carried out following the fitting of the remote control assembly to the gearbox.

- 24 Fit the gear lever, see 37.16.04

Adjusting the reverse baulk plate

Adjustment of the reverse baulk plate must be carried out on a complete gearbox assembly.

- 25 Remove the bottom cover-plate of the gear-lever remote control assembly.
- 26 Locate the gear lever in neutral in a vertical position.
- 27 Slacken the baulk plate adjusting bolts and locknuts until the baulk plate is in contact with the backing plate.
- 28 Tighten the adjusting bolts equally until they just start to move the baulk plate out of contact with the backing plate.
- 29 Adjustment should be such that an effort of 13.6 to 15.9 kgf (30 to 35 lbf) is required to overcome the resistance of the baulk plate. This may be checked using a spring balance attached to the threaded end of the gear lever (gear knob end). Adjust by tightening or slackening the two adjacent bolts and locknuts located on the right-hand side of the reverse baulk plate. **NOTE:** A minimum clearance of 0.254 mm (0.010 in) must exist between the upper face of the baulk plate and the lower edge of the gear-lever bush.

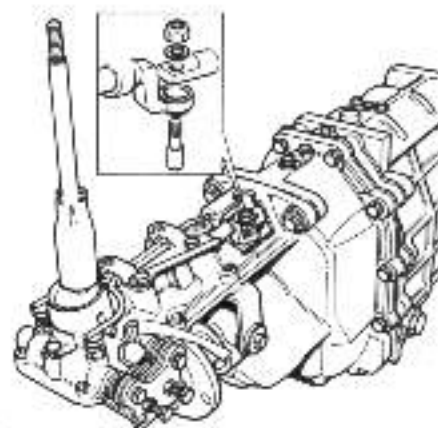
Adjustment of 1st/2nd gate stop

This operation must be carried out following the adjustment of the reverse baulk plate.

- 30 Engage 1st gear.
- 31 Check the clearance between the side of the gear lever and the edge of the baulk plate. This should be 0.10 to 0.30 mm (0.004 to 0.012 in). Adjust by adding or removing shims as necessary.
- 32 Check clearance between baulk plate edge and gear lever with 1st and 2nd gears engaged.
- 33 Fit the bottom cover plate.

Adjustment of gear-lever bias spring

- 34 Unit completely assembled, engage 3rd gear.
- 35 Adjust the screws to position both legs of spring 0.5 mm clear of lever crosspin.
- 36 Apply a light load to gear lever in L.H. direction taking up play. Adjust R.H. screw downward until R.H. spring leg just makes contact with cross-pin.
- 37 Repeat operation 34 on other side. Play will still be present but at extremes of gear-lever travel the cross-pin should make contact with the spring legs.
- 38 Return lever to neutral and rock across gate several times. Lever should return to 3rd/4th gate.
- 39 Tighten the locknuts.
- 40 Adjust the reverse switch, see 86.65.20.



GEAR-CHANGE REMOTE CONTROL ASSEMBLY MOUNTINGS

Remove and refit

37.16.25

Removing

- 1 Disconnect the battery.
- 2 Engage 1st or 3rd gear.
- 3 Raise the car and support securely.
- 4 Remove the four bolts (two top, one either side), plain washers and spring washers securing the remote control assembly to the rear cover.
- 5 Remove the eight rubber bushes and four spacers. Note the relationships of the stepped rubber bushes.

Refitting

- 6 Reverse instructions 1 to 5.

GEARBOX ASSEMBLY — V8

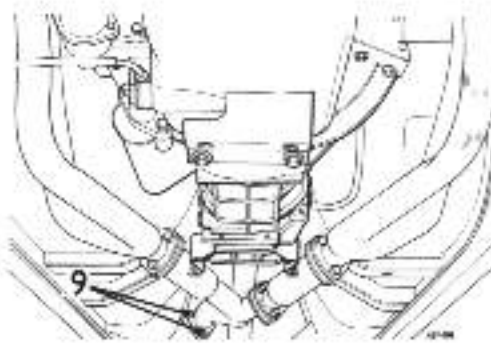
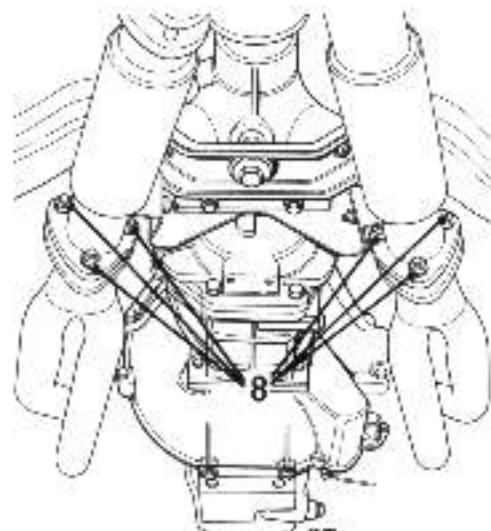
Remove and refit

37.20.01

Removing

- 1 Drive the vehicle onto a ramp.
- 2 Remove the gear-lever knob.
- 3 Remove the two gear-lever rubber grommets.
- 4 Remove the bolt and setscrews securing the bias spring bracket to the gear-lever remote extension.
- 5 Undo the gear-lever ball cover retaining bolt and washer.
- 6 Prise the bias spring over the adjusting bolt heads and remove the gear lever and ball cover. Take care not to lose the nylon plunger and spring from the gear lever.
- 7 Raise the ramp.
- 8 Remove the exhaust down-pipe flange bolts, three each side.
- 9 Remove the three branch pipe to intermediate pipe flange bolts.
- 10 Remove the two down-pipe gearbox mounting nuts, bolts and washers.
- 11 Remove the front section of the exhaust system up to the intermediate pipe.

- 12 Disconnect the propeller shaft drive flange from the gearbox drive flange, four bolts and Nyloc nuts.
- 13 Position a ramp jack under the engine sump. Interpose a piece of wood to prevent damaging the engine sump.
- 14 Raise the jack to support the engine.

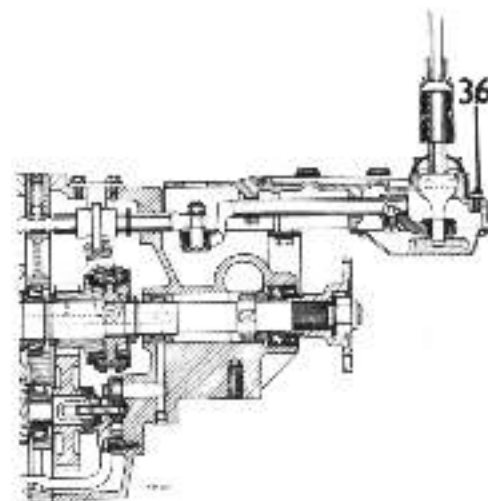


- 15 Remove the four bolts, spring washers, and the two plates securing the engine rear mounting to the body.
- 16 Lower the ramp jack, taking care not to foul the engine bulkhead with the air cleaner assembly.
- 17 Remove the speedometer cable clamp bolt, and remove the cable.
- 18 Disconnect the reverse light switch leads at the two snap connectors and bend back the tab to release the harness from the gearbox.
- 19 Remove the two bolts and washers securing the sump stiffener plate to the gearbox.
- 20 Remove the two bolts securing the clutch slave cylinder to the gearbox bell housing and withdraw the slave cylinder.
- 21 Remove the four bolts retaining the fly-wheel cover-plate to the gearbox bell housing.
- 22 Remove the eight bolts securing the gearbox bell housing to the rear engine plate. Note lengths and positions.
- 23 Remove the gearbox.

Refitting

- 24 Engage first gear.
- 25 Refit the gearbox to the engine and secure the gearbox bell housing to the engine plate with the eight bolts and spring washers in their previously noted positions. Disengage first gear.
- 26 Refit the reverse light harness to the gearbox, bend over the retaining tab, and reconnect the two snap connectors.
- 27 Refit the speedometer cable and secure with the clamp bolt.
- 28 Raise the ramp jack.
- 29 Locate the rear engine mounting to the body, securing with the four bolts, spring washer and the two metal plates, and check the dimension in operation 12.37.01, instruction 48.
- 30 Lower the ramp jack.
- 31 Refit the clutch slave cylinder, ensuring that the push-rod is correctly located in the clutch operating arm.

- 32 Refit the propeller shaft drive flange to the gearbox drive flange and secure with the four bolts and Nyloc nuts.
- 33 Refit the exhaust system.
- 34 Lower the ramp.
- 35 Refit the gear lever, ensure that the spring and nylon plunger are in position.



- 36 Refit the gear-lever ball cover and secure with the bolt and washer.
- 37 Reposition the bias spring ends so that they locate on the heads of the adjustment bolts.
- 38 Tighten the bias spring clamp bolt and setscrew.
- 39 Refit the gear-lever rubber grommets.
- 40 Refit the gear-lever knob.

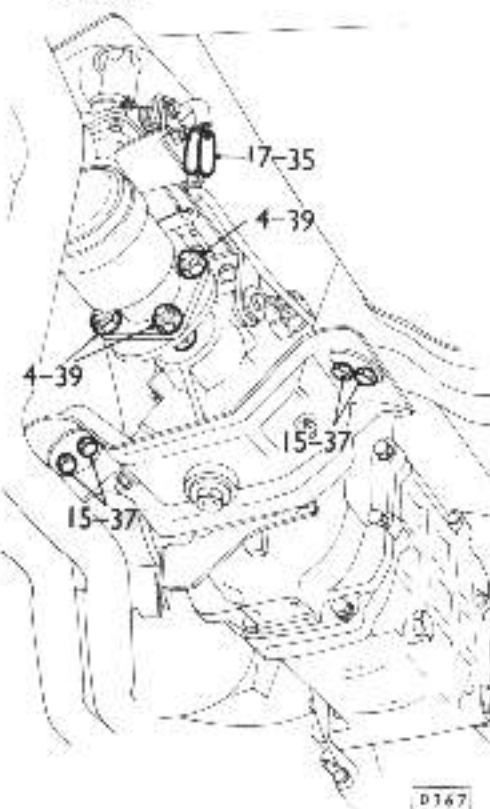
GEARBOX ASSEMBLY — 6-cylinder

Remove and refit

37.20.01

Removing

- 1 Drive the vehicle onto a ramp.
- 2 Remove the gear-change lever, see 37.16.04.
- 3 Raise the ramp.
- 4 Disconnect the four bolts and Nyloc nuts securing the propshaft to the gearbox drive flange and displace the propshaft to one side.

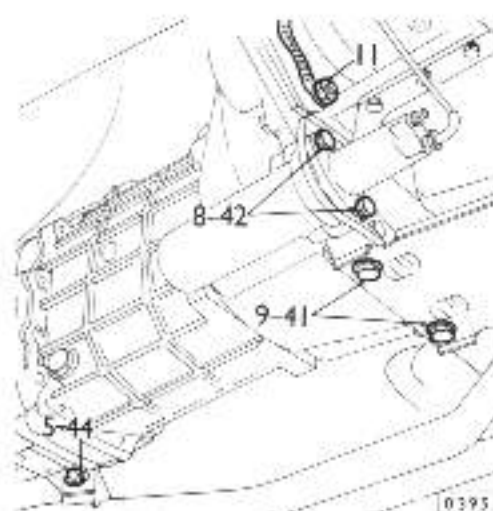


- 5 Remove the nut, washer and bolt securing the exhaust down-pipe to the gearbox extension bracket.
- 6 Remove the three nuts securing the down-pipe to the exhaust manifold flange.

- 7 Remove the front section of the exhaust system from the intermediate pipe.
- 8 Remove the two bolts securing the clutch slave cylinder to the gearbox bell housing and withdraw the slave cylinder.
- 9 Remove the two bolts and washers securing the sump stiffener plate to the gearbox.
- 10 Remove the three bolts retaining the flywheel cover-plate to the gearbox bell housing and remove the plate.
- 11 Remove the lower bolt securing the starter motor to the engine plate and displace the earth lead.
- 12 Remove the starter motor upper securing bolt and reposition starter clear of the gearbox.
- 13 Position a ramp jack under the engine sump. Interpose a piece of wood to prevent damaging the sump.
- 14 Support the engine on the ramp jack.
- 15 Remove the four bolts, spring washers and the two plates securing the rear mounting cross-member to the body.
- 16 Lower the engine on the ramp jack.
- 17 Disconnect the reverse light switch leads at the two snap connectors and bend back the harness clips to release the harness from the gearbox.
- 18 Remove the speedometer cable clamp bolt, and remove the cable from the gearbox.
- 19 Remove the securing bolt and displace the transducer unit from the clutch housing.
- 20 Remove the dowel bolt and the nuts and bolts securing the clutch housing to the engine leaving three bolts supporting the gearbox.
- 21 Position the diagnostic plug socket away from the clutch housing.
- 22 Support the gearbox on a unit lift.
- 23 Remove the three remaining securing bolts and displace the water rail from the clutch housing.
- 24 Remove the gearbox from the vehicle.
- 25 Remove ancillary equipment as necessary.

Refitting

- 26 Fit the relevant ancillary equipment.
- 27 With the gearbox in gear on the unit lift, lift the unit into position and engage the input shaft splines in the clutch.
- 28 Push the gearbox fully into position, reposition the transducer/water rail brackets and fit the three upper securing bolts. Do not tighten the bolts.
- 29 Fit and tighten the dowel bolt and finally tighten the upper securing bolts.
- 30 Remove the unit lift and refit and tighten the five left-hand gearbox to engine securing bolts and nuts.
- 31 Reposition the transducer unit in the clutch housing and fit and tighten the securing bolts.
- 32 Re-align the diagnostic plug bracket and fit and tighten the securing bolts in the clutch housing.
- 33 Reposition the starter motor and engine earth lead and fit and tighten the securing bolts, washers and nuts.
- 34 Refit the speedometer cable and clamp, fit and tighten the clamp bolt.
- 35 Refit the reverse light leads securely in the harness clips and reconnect the leads at the snap connectors.
- 36 Lift the engine into position on the ramp jack.
- 37 Align the rear mounting cross-member and securing plates, fit and tighten the four securing bolts, and check the dimension in operation 12.45.10, instruction 17.
- 38 Lower the engine and remove the jack and wooden block.
- 39 With the gearbox in neutral, connect the propshaft and fit and tighten the four bolts and Nyloc nuts.
- 40 Refit the flywheel cover plate and fit and tighten the three securing bolts.
- 41 Refit and tighten the two bolts and washers securing the sump stiffener plate to the gearbox.



- 42 Reconnect the clutch slave cylinder to the push-rod and fit and tighten the two securing bolts.
- 43 Reposition the exhaust down-pipe and fit and tighten the three securing nuts to the manifold flange.
- 44 Fit and tighten the bolt and nut securing the exhaust down-pipe to the gearbox bracket and finally tighten the down-pipe fixings.
- 45 Lower the vehicle on the ramp.
- 46 Refit the gear-change lever, see 37.16.04.
- 47 Engage reverse gear and check/adjust the operation of the reverse light switch, see 86.65.20.

GEARBOX

DRIVE FLANGE

Remove and refit

37.10.01

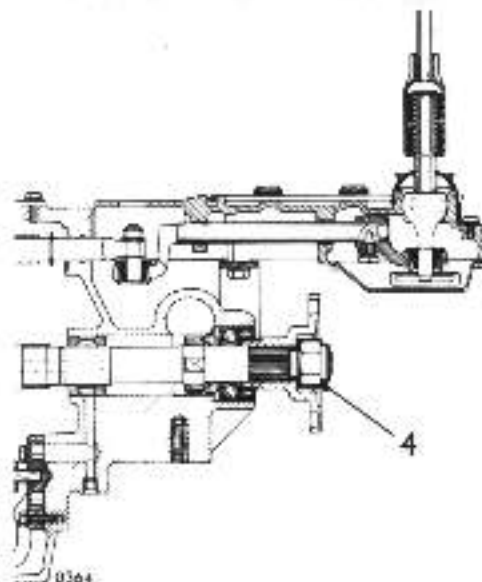
Service tools: RG 421 or 18G 1205

Removing

- 1 Raise the car on a ramp or jack and support securely.
- 2 Scribe the relationship of the propeller shaft and gearbox flanges and remove the four securing nuts and bolts.
- 3 Release the propeller shaft from the gearbox flange.
- 4 Using tool RG 421 or 18G 1205 to prevent rotation of the gearbox driving flange, remove the securing nut and washer.
- 5 Withdraw the driving flange.

Refitting

- 6 Reverse instructions 1 to 5. The gearbox flange nut should be torqued to 16.60 kgf m (120 lbf ft). Propeller shaft bolts to 4.70 kgf m (34 lbf ft).



CLUTCH/BELL HOUSING

Remove and refit

37.12.07

Service tool: ST 1136

Removing

- 1 Remove the gearbox from the car, see 37.20.01.
- 2 Withdraw the clutch release lever and release bearing, see 33.25.12.
- 3 Remove the six bolts, plain and spring washers securing the clutch housing to the gearcase.
- 4 Remove the clutch housing.

Refitting

- 5 Reverse instructions 1 to 4.
- 6 Bell housing bolts should be torqued to 8.16 kgf m (59 lbf ft).

REAR COVER

Remove and refit

37.12.42

Service tools: RG 421 or 18G 1205

Removing

- 1 Disconnect the battery.
- 2 Remove the gear lever.
- 3 Raise the car on a ramp or jack and support securely.
- 4 Disconnect the exhaust down-pipes from the gearbox bracket. Remove the nuts securing the down-pipes to the manifold flange and displace the exhaust system to one side (6-cylinder engines). Remove the exhaust system branch pipe and right-hand resonator, see 30.10.06 (V8 engines). On emission specification vehicles disconnect the lambda sensor and remove the right-hand heat shield and catalyst.
- 5 Remove the gearbox drain plug and drain the oil.
- 6 Disconnect the speedometer cable and remove the speedometer drive pinion and housing, see 37.25.05.
- 7 Disconnect the propeller shaft from the gearbox flange.
- 8 Using tool RG 421 or 18G 1205 to prevent shaft rotation remove the nut and washer securing the gearbox drive flange.
- 9 Withdraw the drive flange.
- 10 Locate a jack under the engine flywheel and support the weight of engine and gearbox.
- 11 Remove the four bolts, spring washers and plate washers securing the gearbox rear cross-member to the body.
- 12 Carefully lower the jack slightly to facilitate access to the top of the gearbox.
- 13 Remove the nut, washer and pin securing the remote control linkage to the gearbox selector rod and detach the reverse switch lead.
- 14 5-speed only: Remove the two bolts and spring washers securing the flange of the fifth gear spool locating boss.
- 15 5-speed only: Withdraw the fifth gear spool locating boss.
- 16 Place a container under the gearbox centre plate/rear cover to catch residual oil when the rear cover is disturbed.
- 17 Remove the bolts and spring washers securing the rear cover to the gearbox.

