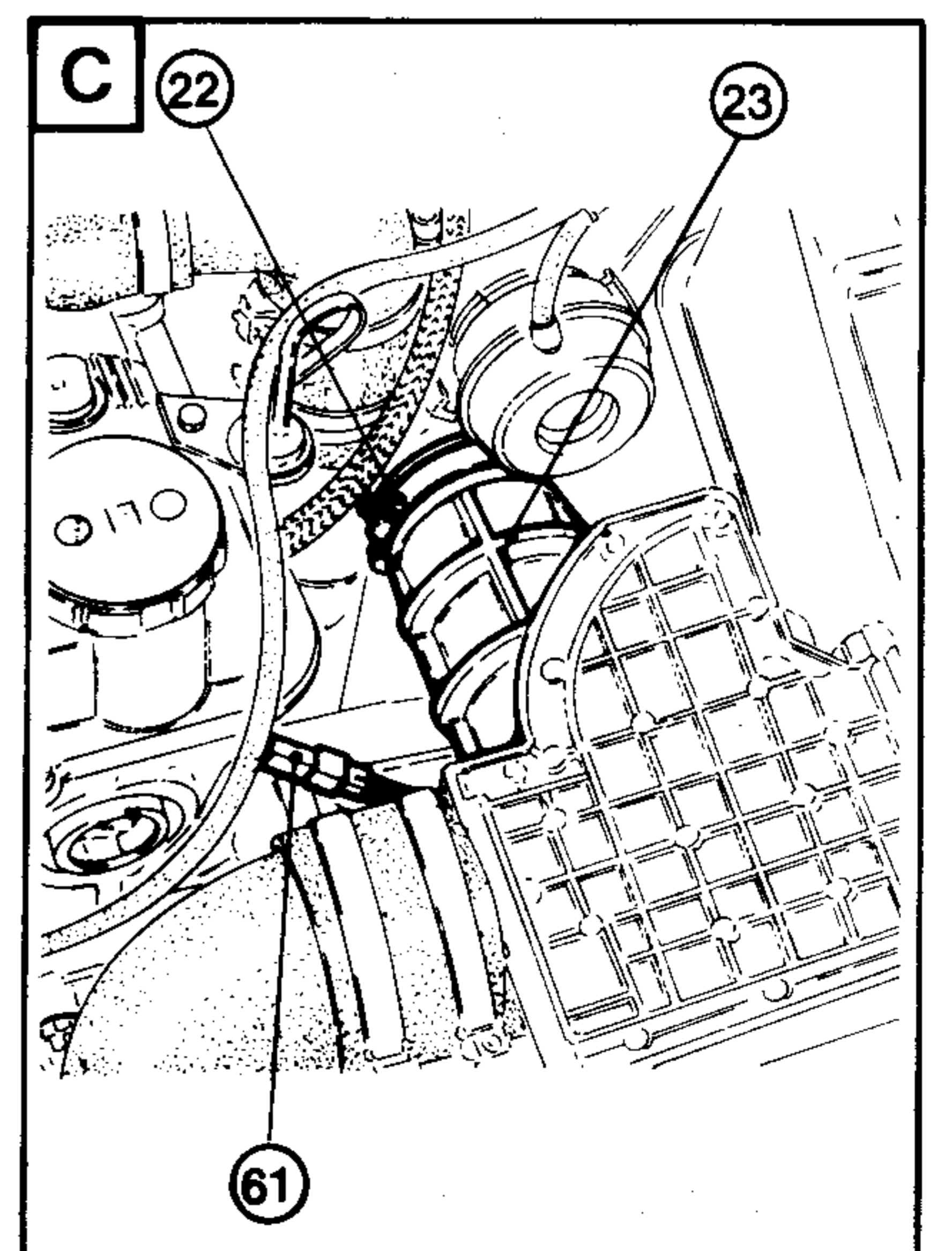
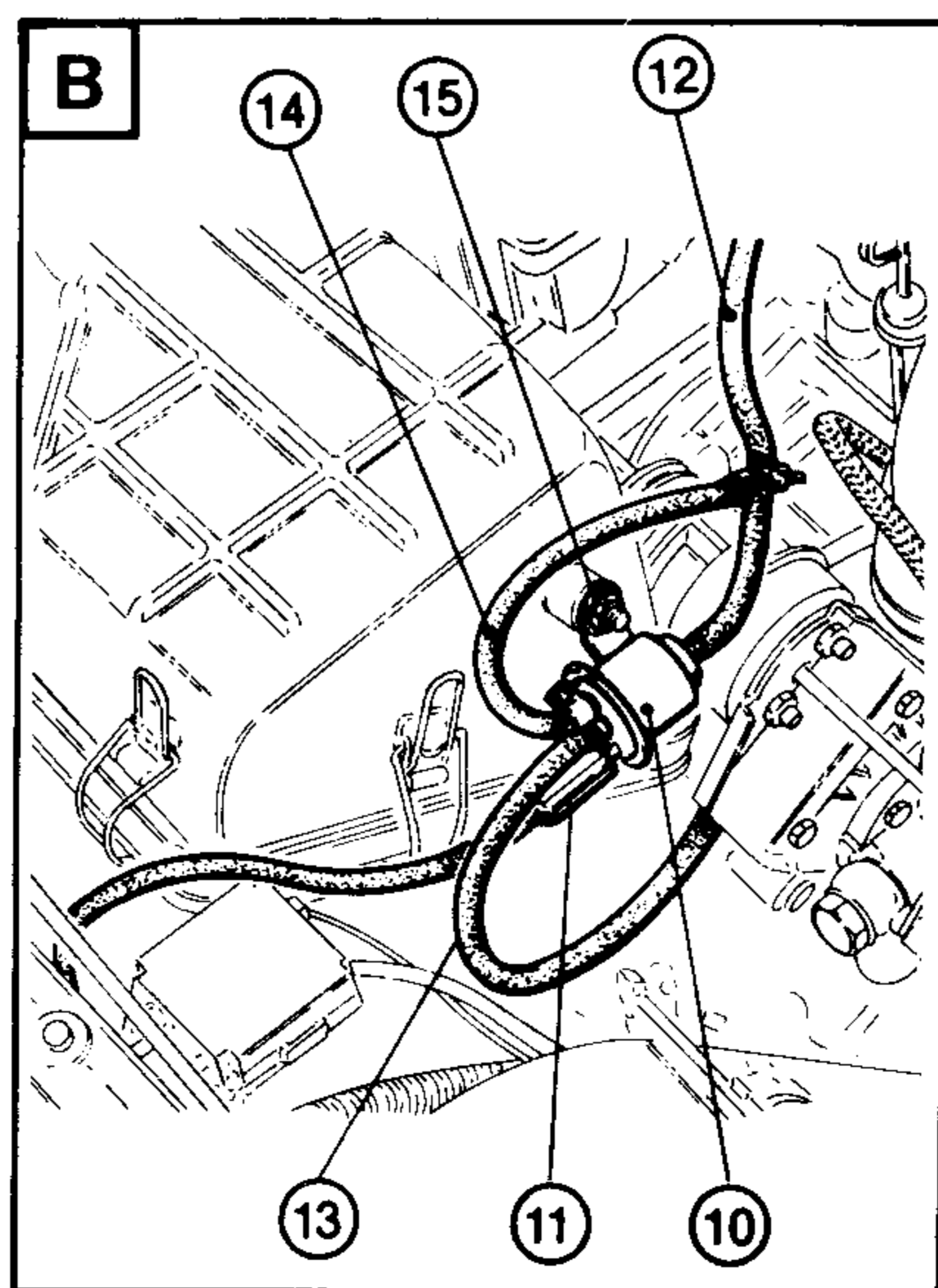
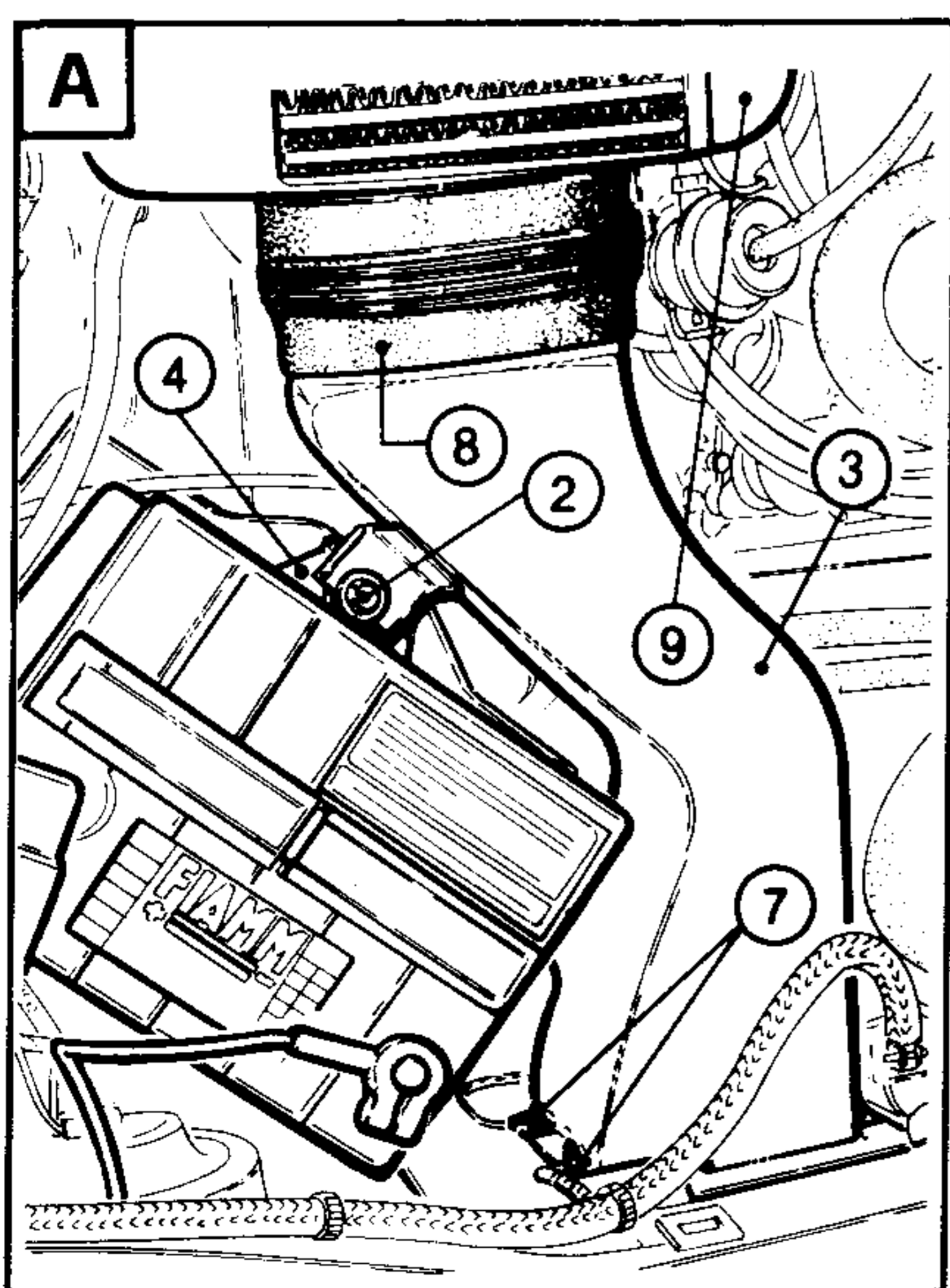
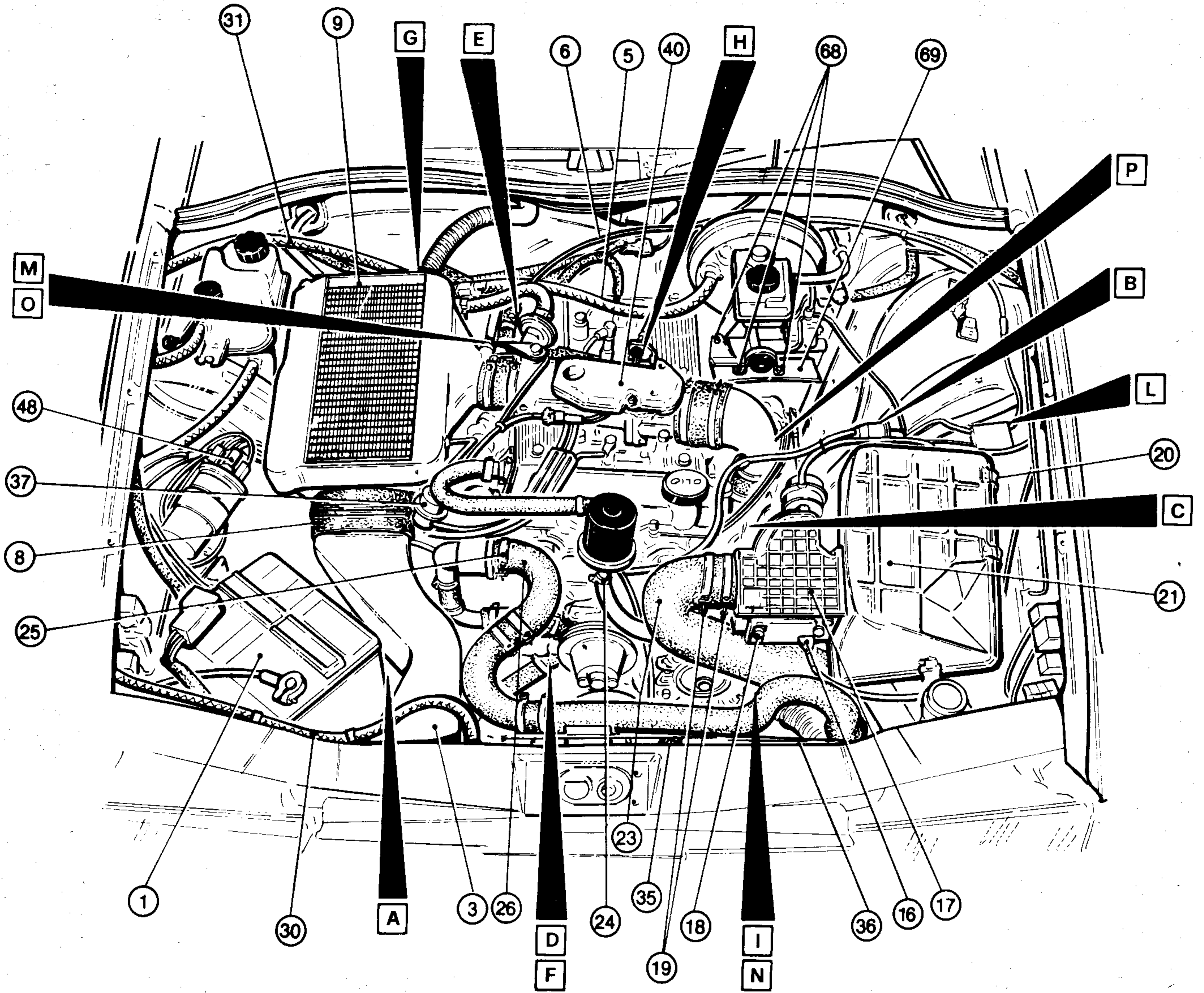
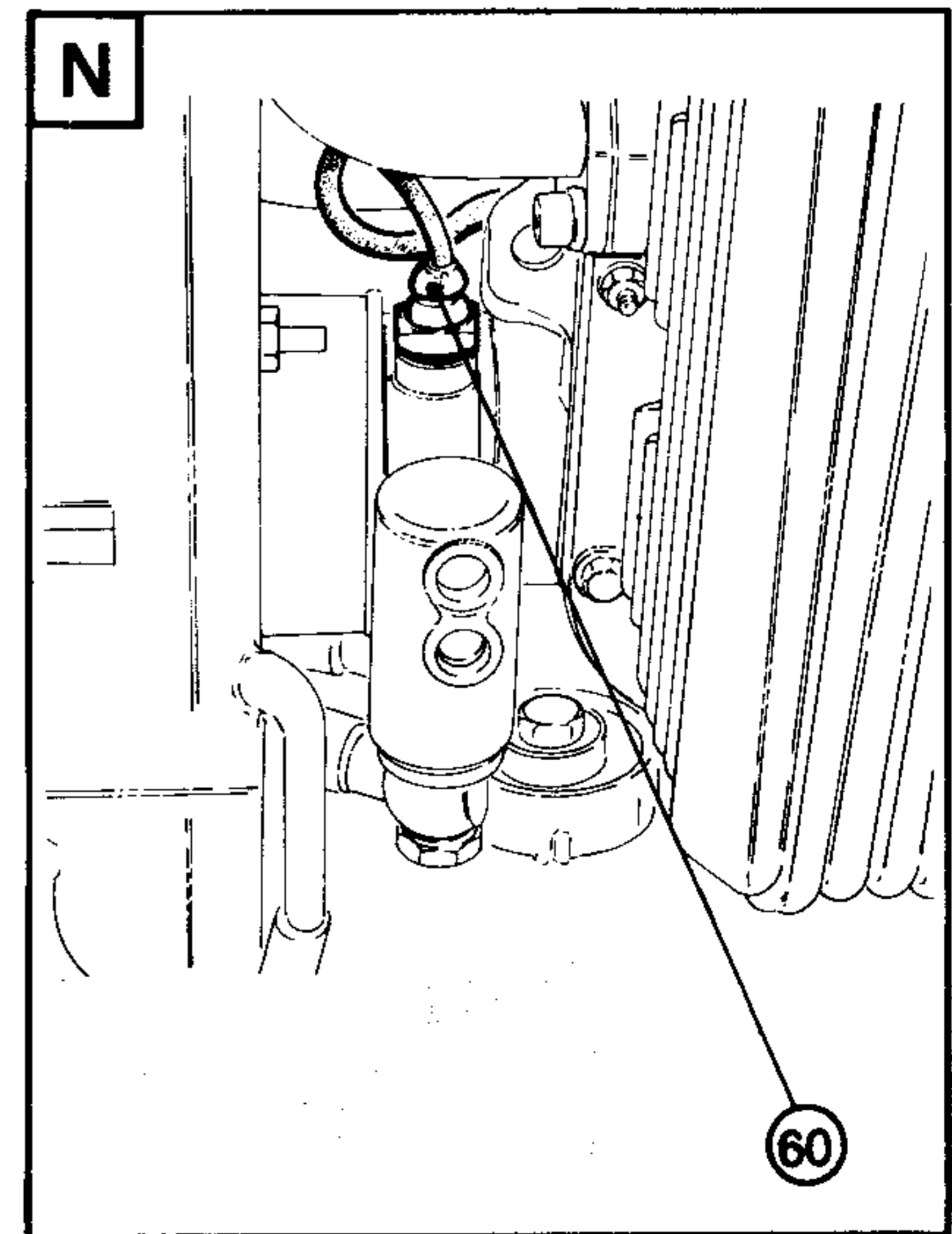
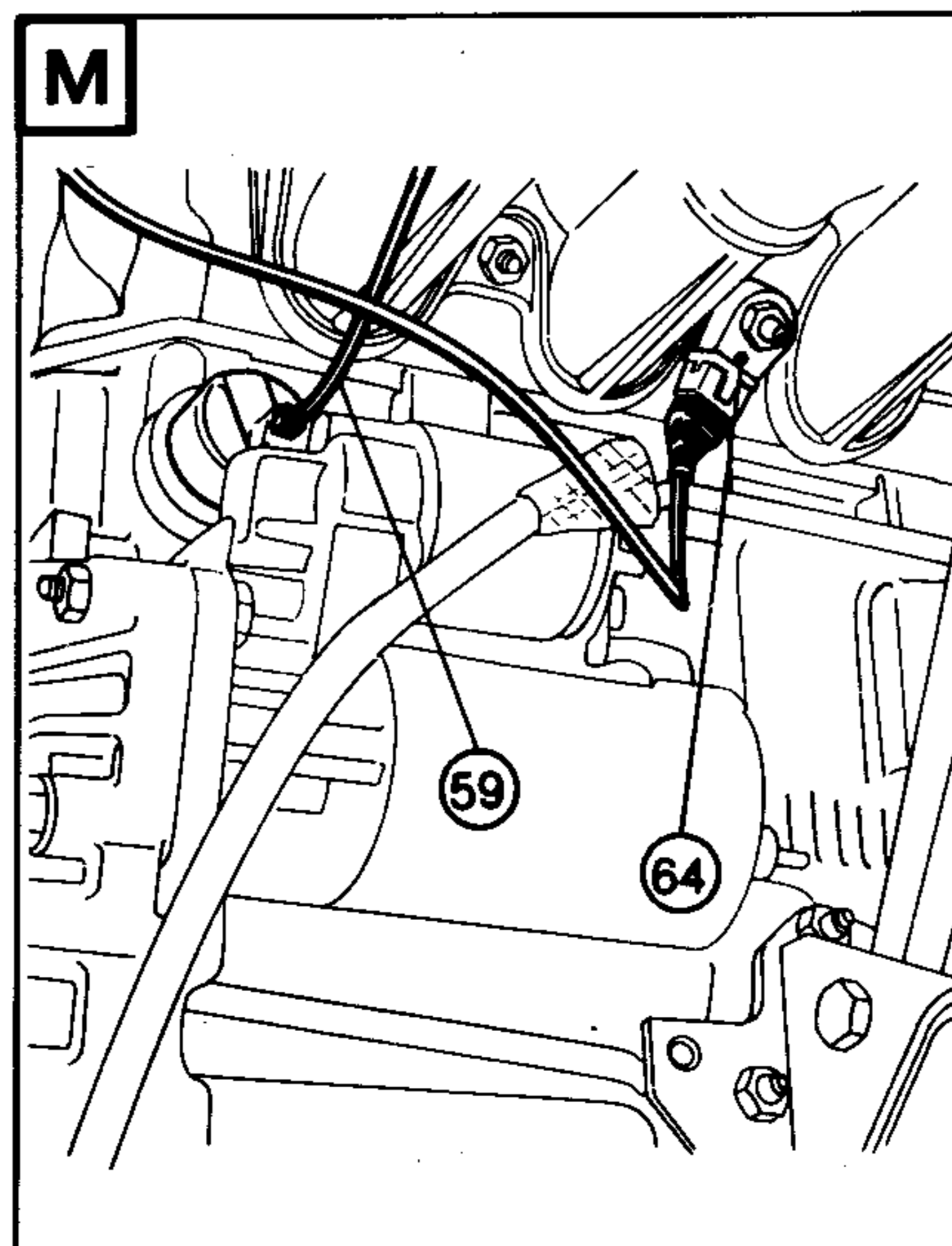
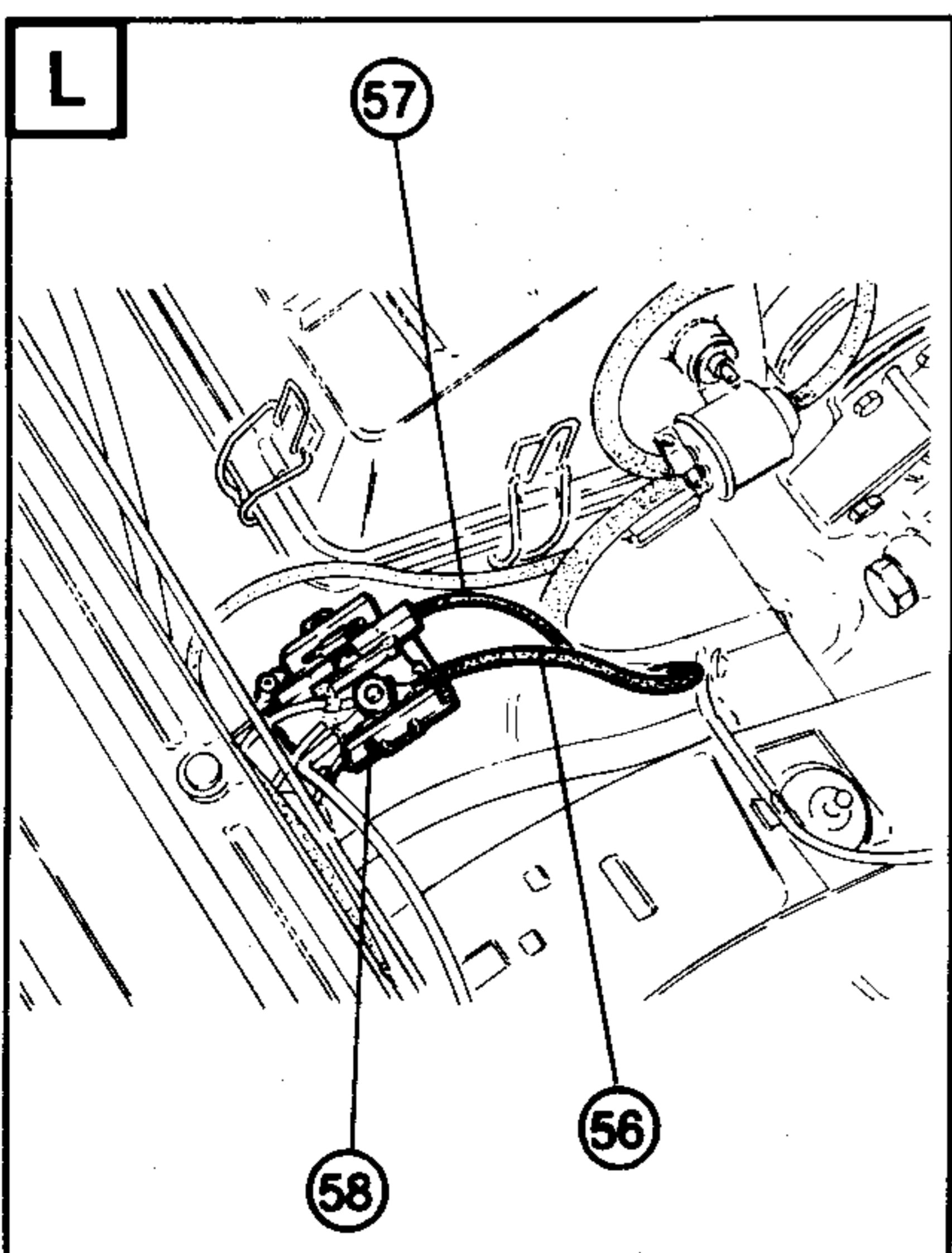
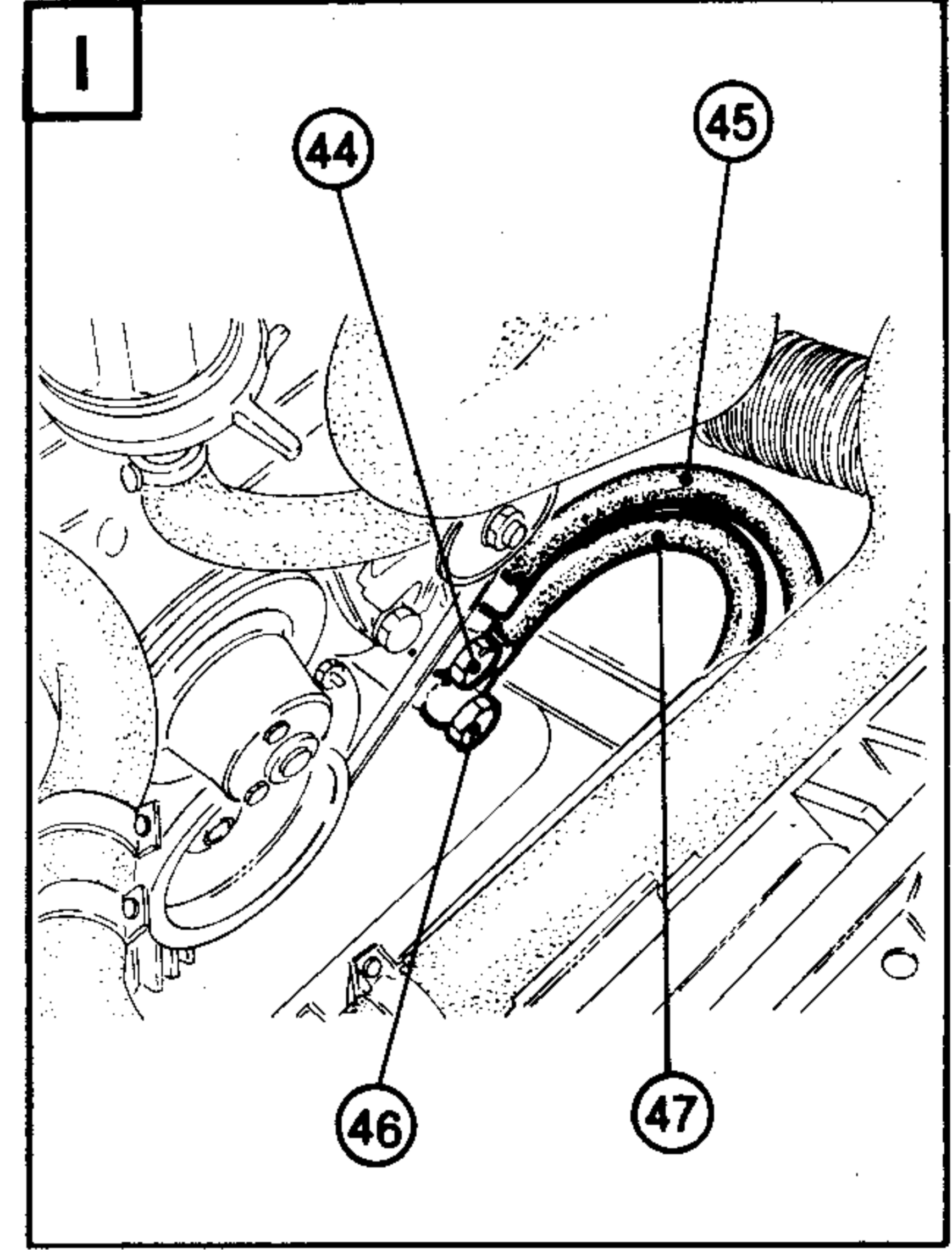
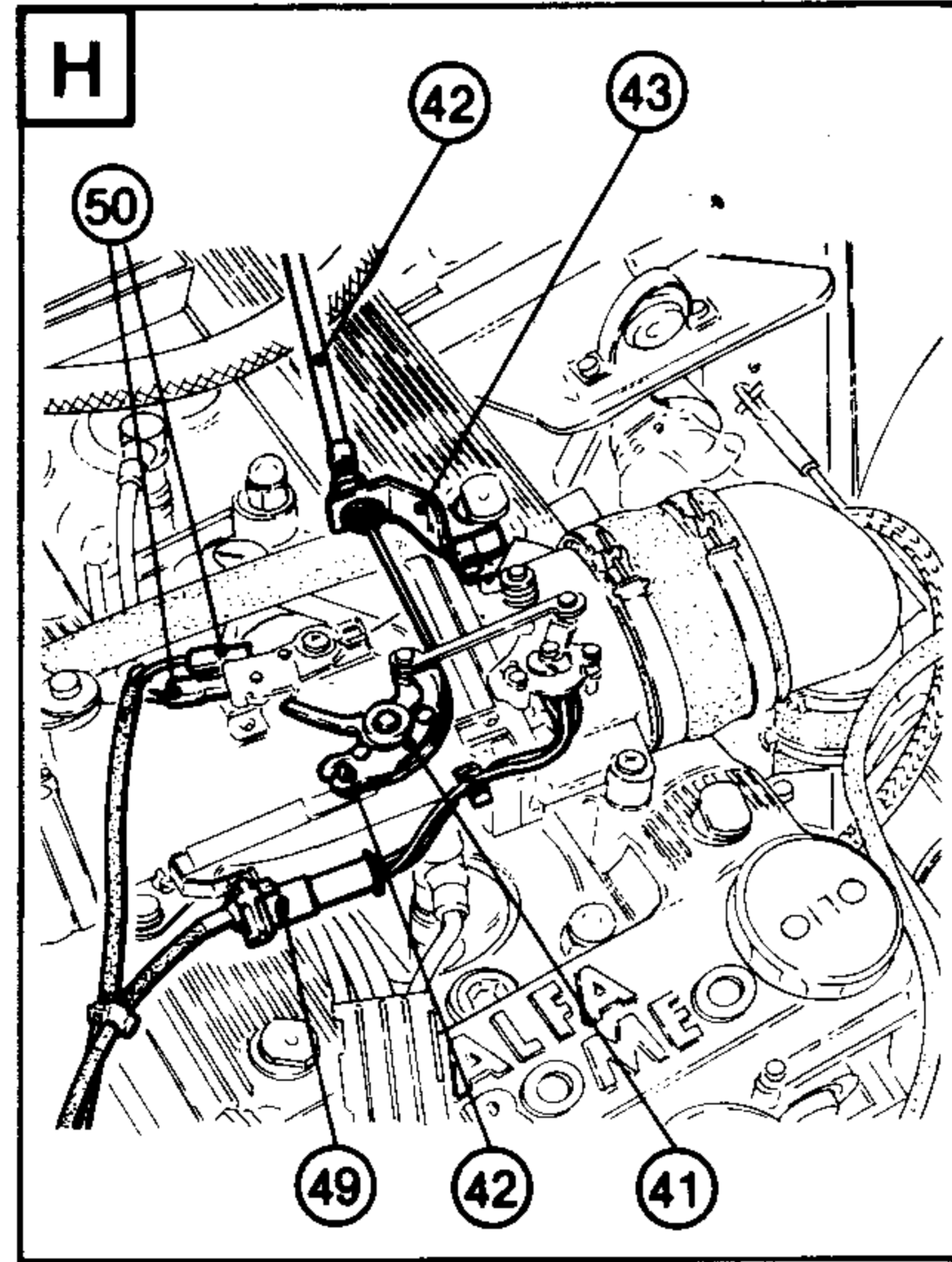
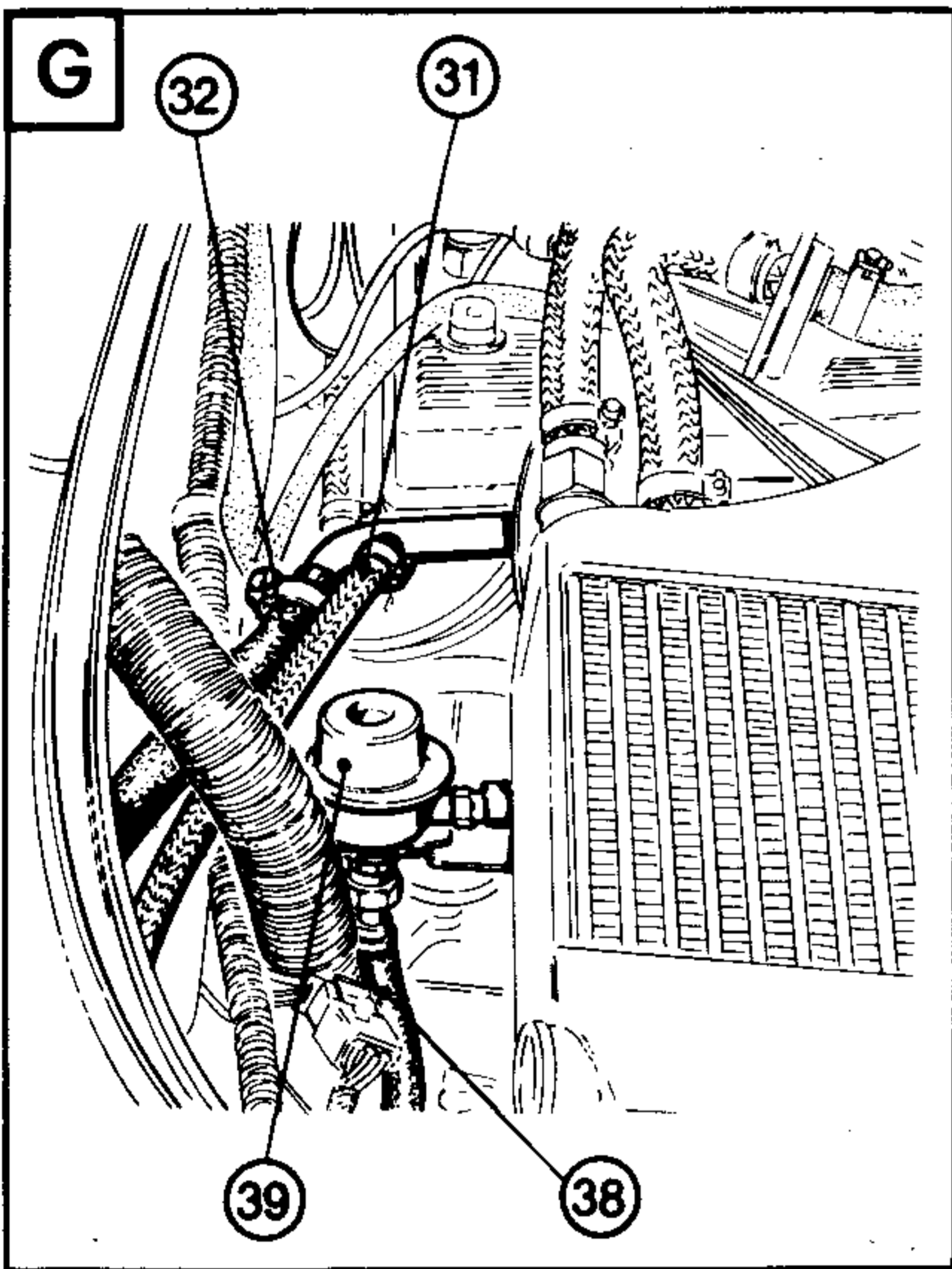
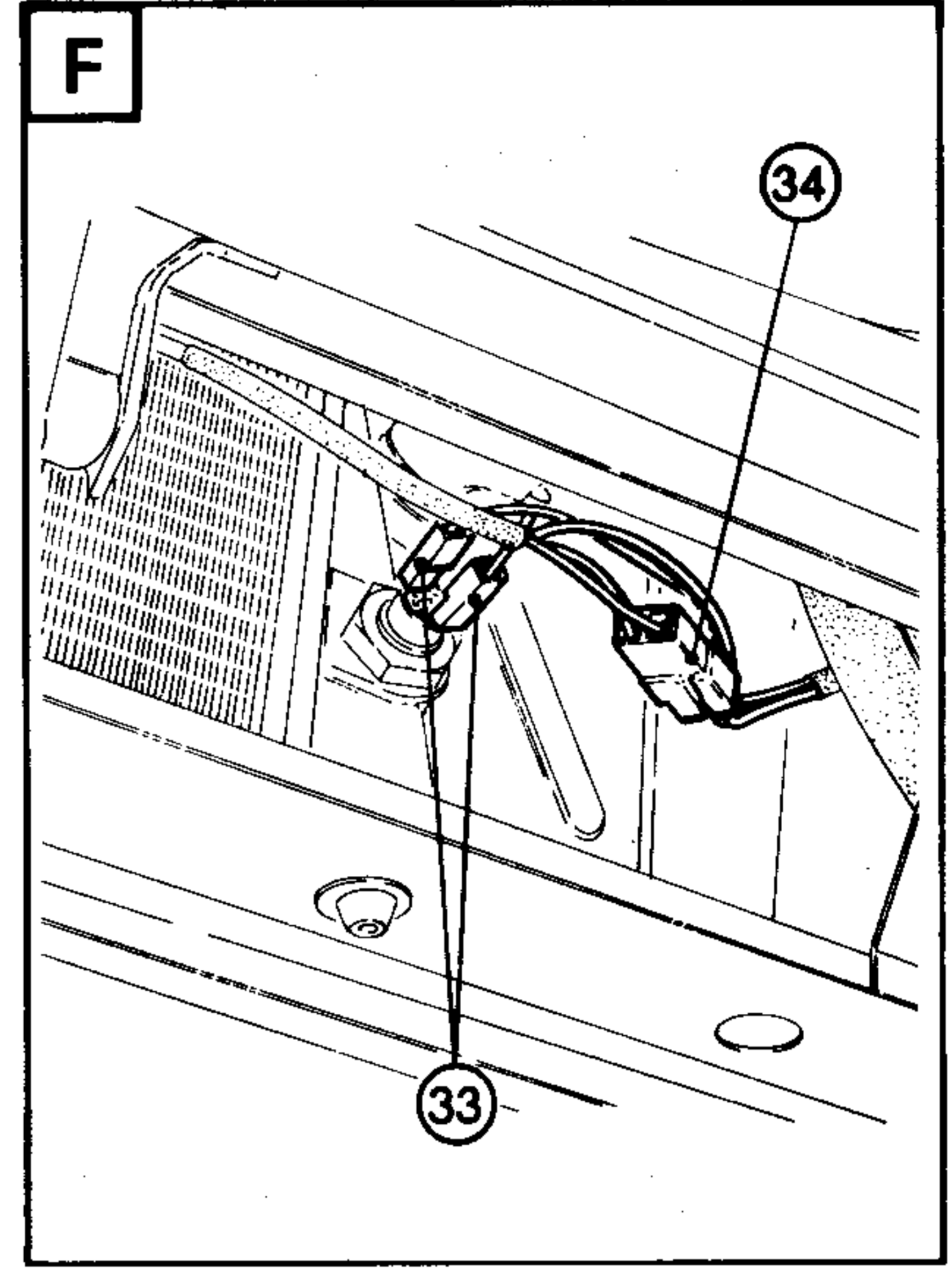
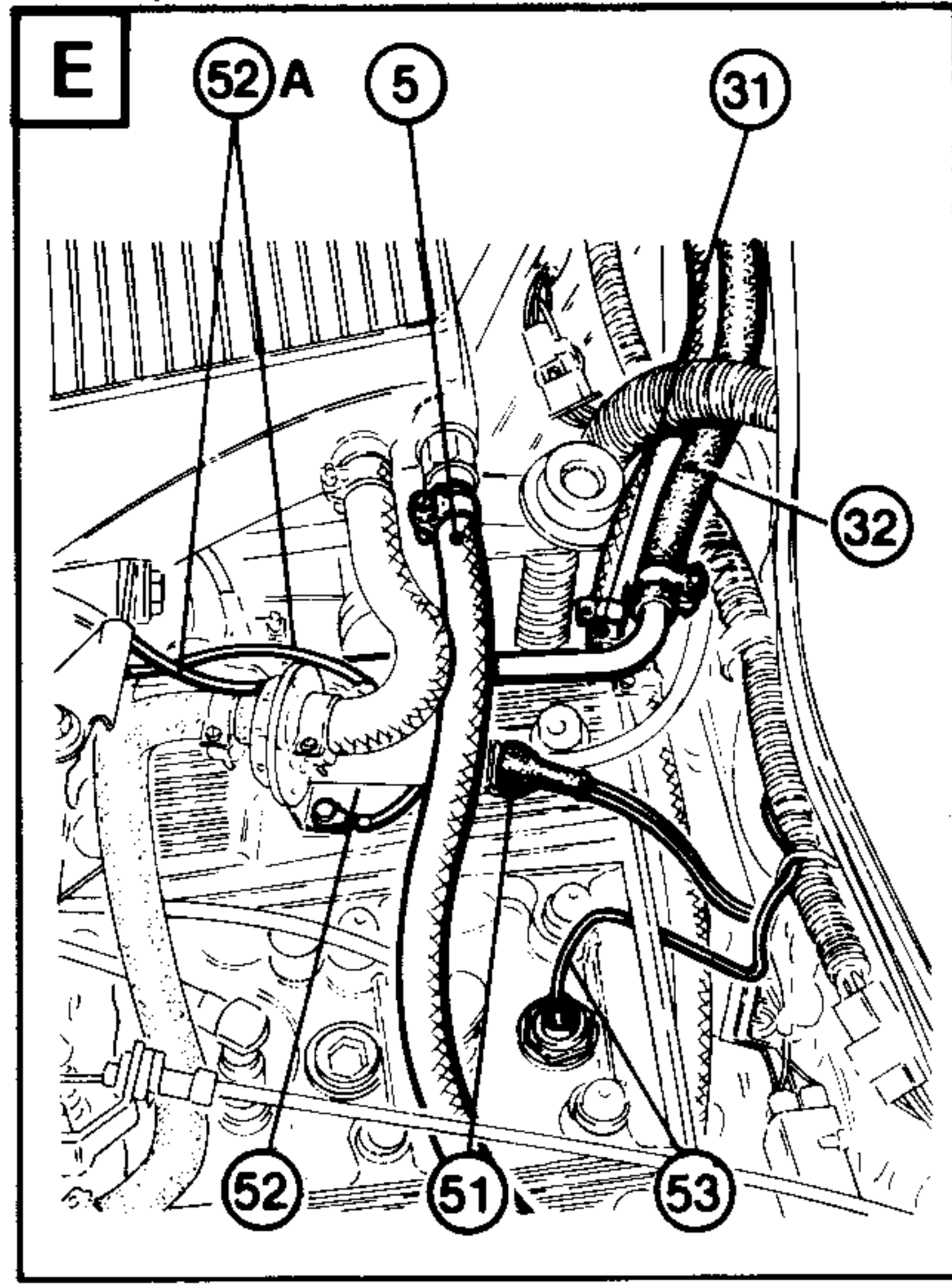
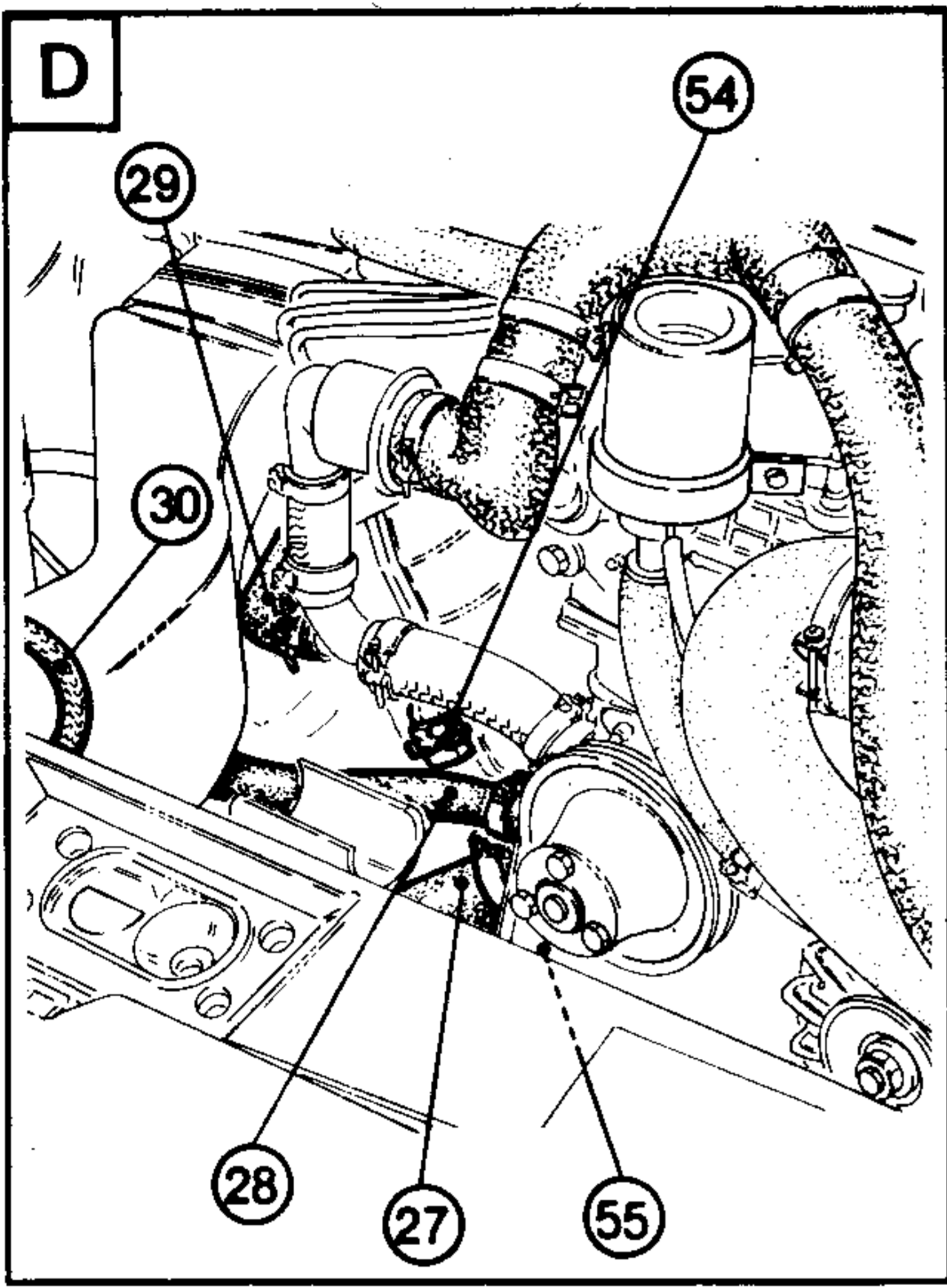


ENGINE MAIN MECHANICAL UNIT

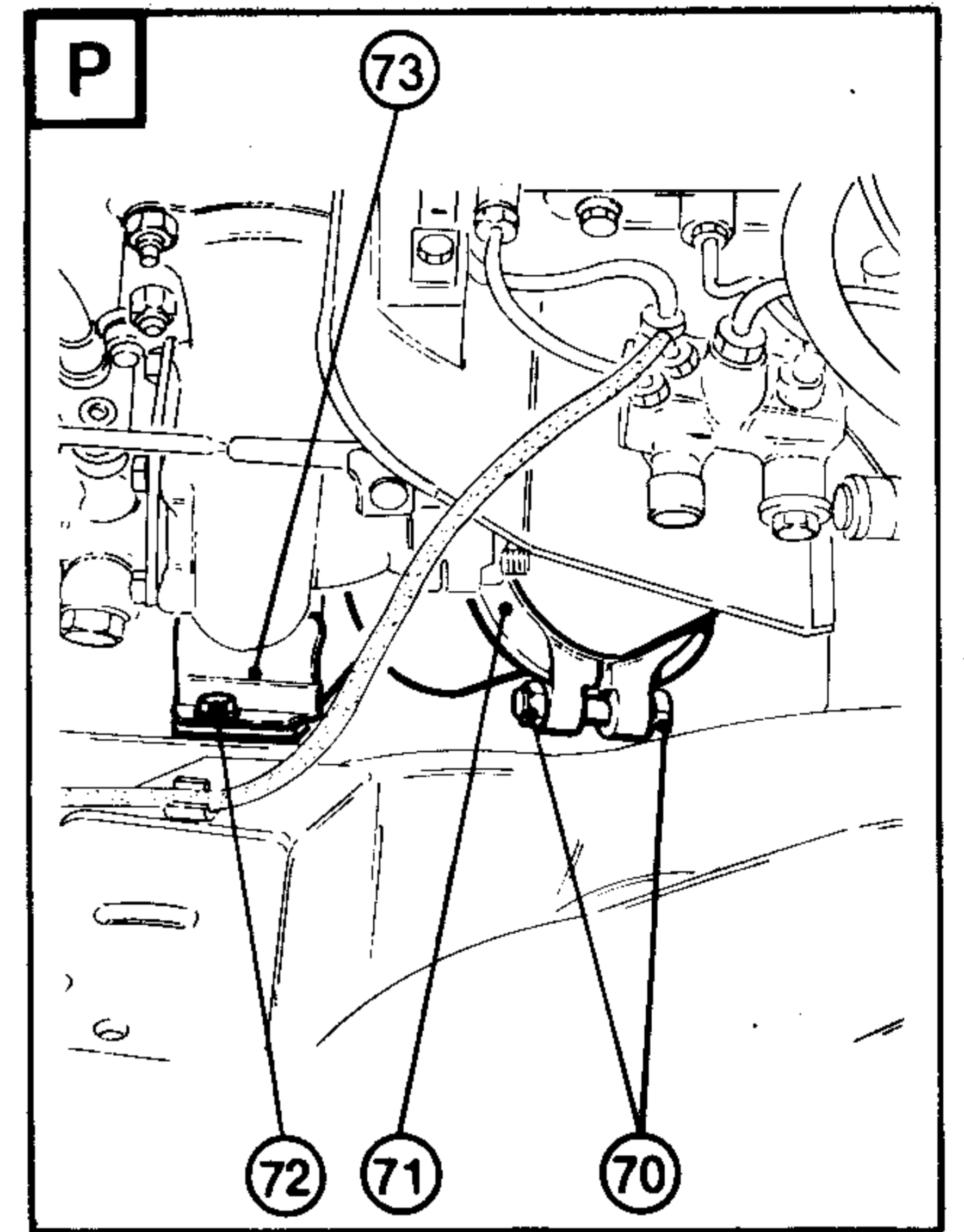
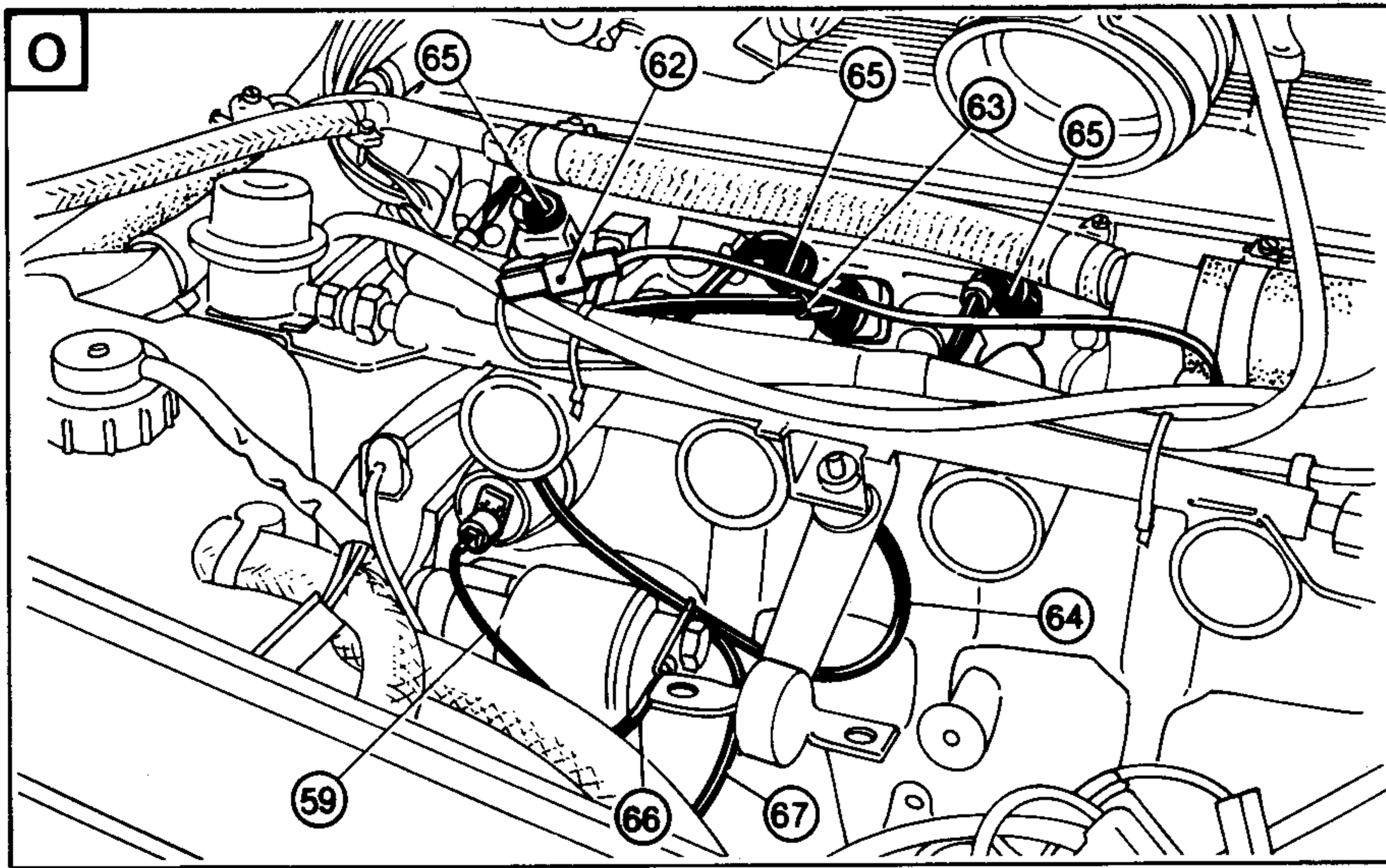
VIEW OF ENGINE COMPARTMENT **Alfa 75 1.8 turbo**



ENGINE MAIN MECHANICAL UNIT



ENGINE MAIN MECHANICAL UNIT

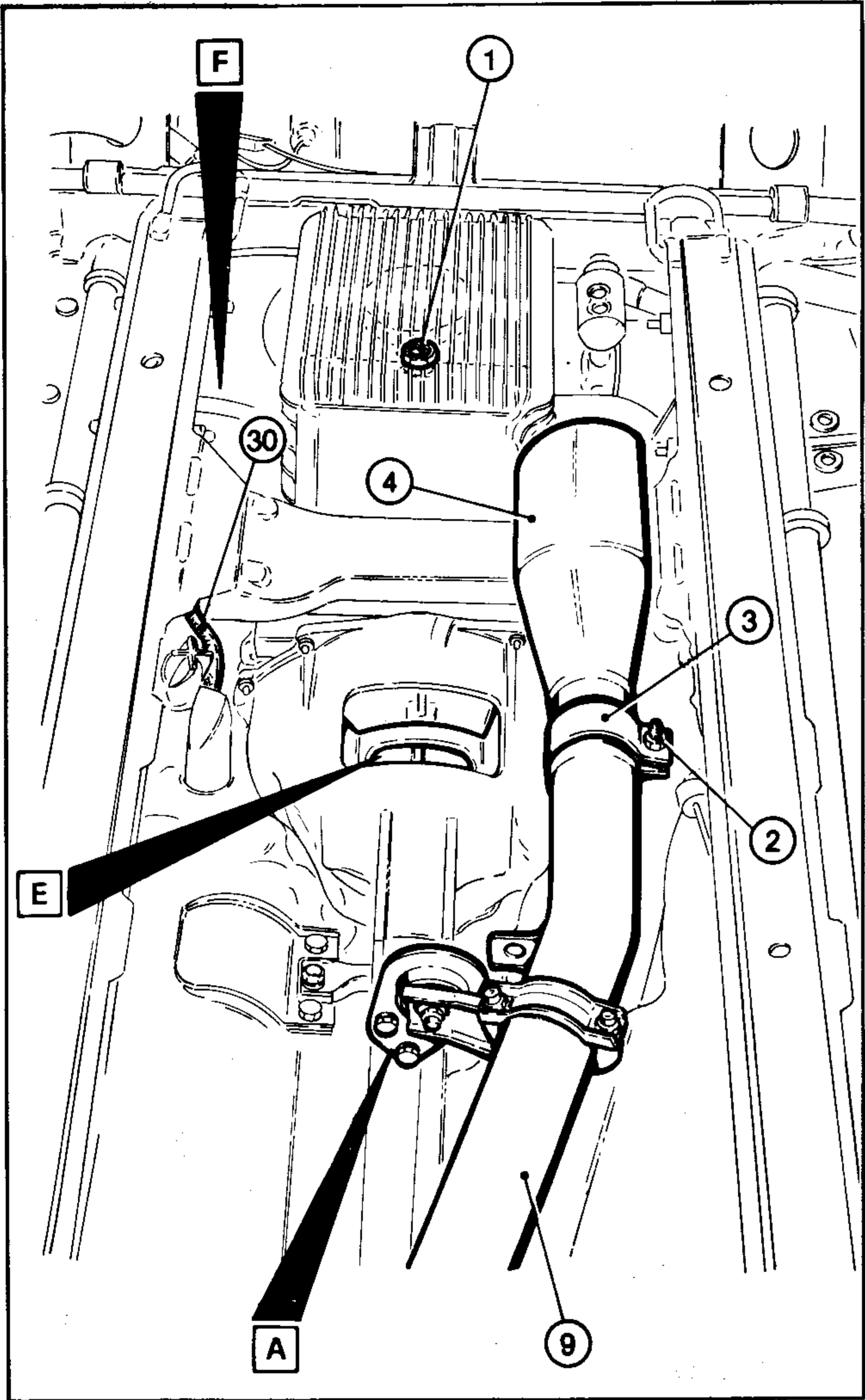


- | | | |
|--|---|---|
| 1. Battery | 27. Coolant delivery sleeve | 55. Engine oil level indicator light cable |
| 2. Air intake and battery bracket retaining screws | 28. Coolant return hose (from heater) | 56. Alternator supply cable |
| 3. Intercooler air intake | 29. Radiator coolant supply hose | 57. Alternator indicator light cable |
| 4. Battery retaining bracket | 30. Radiator breather hose | 58. Terminal board |
| 5. Servo brake vacuum intake hose | 31. Cooling system breather hose | 59. Engine oil pressure indicator cable |
| 6. Supercharging pressure sender cable | 32. Coolant delivery hose (to heater) | 60. Low engine oil pressure indicator light cable |
| 7. Intercooler air intake retaining screws | 33. Fan control cable | 61. Connector for low engine oil pressure cable |
| 8. Sleeve | 34. Fan supply cable | 62. Coolant temperature indicator cable |
| 9. Intercooler | 35. Radiator retaining screw | 63. Coolant temperature sensor cable |
| 10. Supercharging pressure control solenoid valve (Pierburg) | 36. Radiator | 64. Knock sensor cable |
| 11. «Pierburg» solenoid valve supply cable | 37. Pressure regulator | 65. Electro-injector supply cables |
| 12. Hose connecting oil sedimenter | 38. Fuel delivery hose | 66. Starting motor supply cables |
| 13. Pressure intake hose (from compressor) | 39. Hammering damper | 67. Starting motor electromagnet energizing cable |
| 14. Hose connecting overpressure valve | 40. Accelerator control guard | 68. Heat guard retaining screws |
| 15. Nuts and washers retaining «Pierburg» valve | 41. Accelerator control cam (throttle control) | 69. Heat guard |
| 16. Air flow meter cable | 42. Accelerator control cable | 70. Collar retaining bolt |
| 17. Air flow meter | 43. Accelerator control cable support bracket | 71. Collar |
| 18. Air intake upper retaining screw | 44. Union | 72. Engine mount upper retaining screws |
| 19. Air intake retaining clamps | 45. Oil delivery hose (to radiator) | 73. Heat guard (on LH mount) |
| 20. Air filter cover retaining clips | 46. Union | |
| 21. Air filter cover | 47. Oil return hose (from radiator) | |
| 22. Clamp securing air intake duct to compressor | 48. Ignition coil cable | |
| 23. Air intake duct | 49. Throttle position sending unit cable | |
| 24. Oil vapour exhaust hose | 50. Minimum cut-out switch | |
| 25. Sleeve clamp | 51. Auxiliary air solenoid valve supply cable | |
| 26. Coolant return sleeve | 52. Auxiliary air solenoid valve ground cables | |
| | 52A Air intake manifold ground cables | |
| | 53. Coolant maximum temperature indicator light cable | |
| | 54. Hall effect sensor cable | |

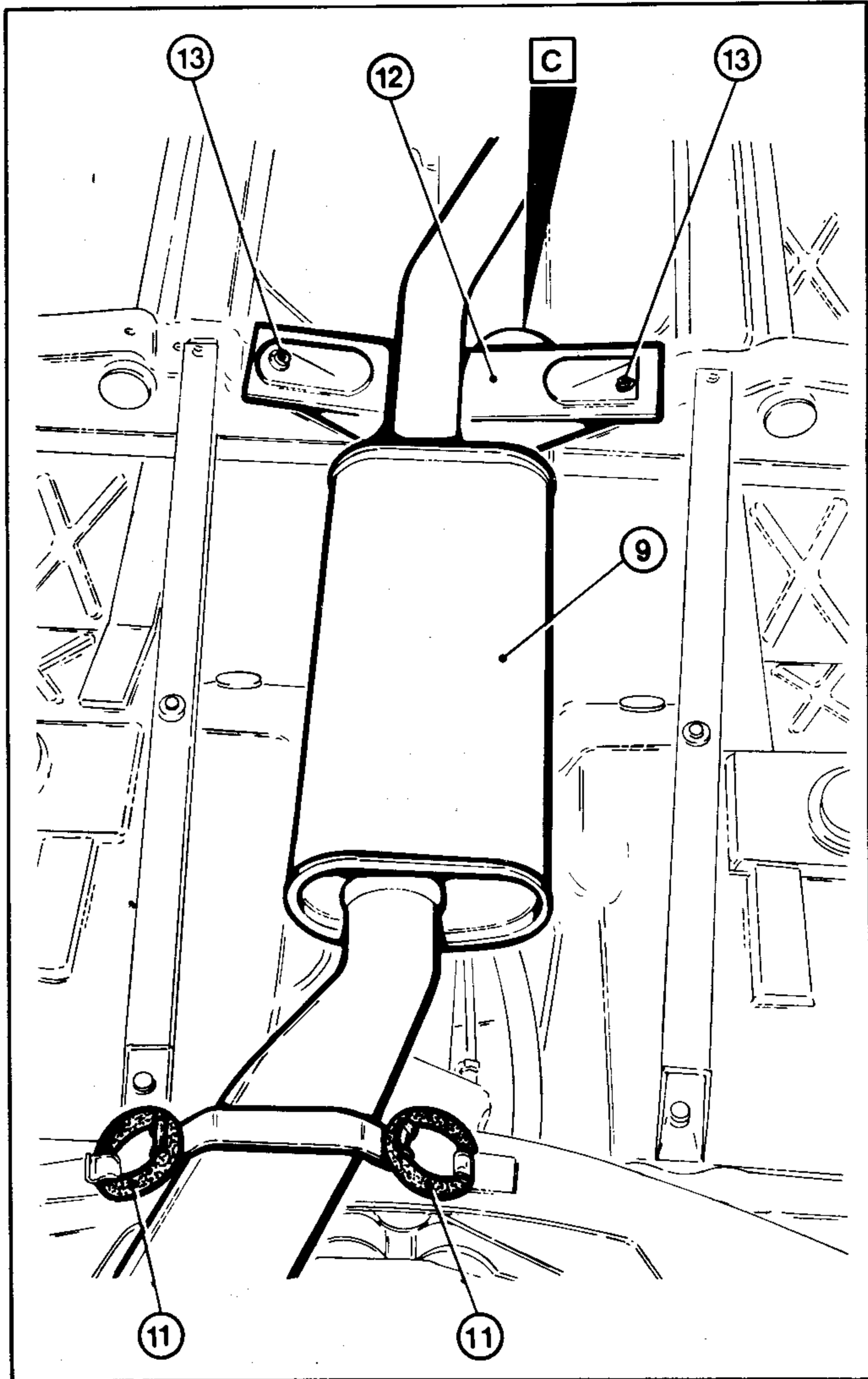
ENGINE MAIN MECHANICAL UNIT

VIEW OF UNDERBODY Alfa 75 1.8 turbo

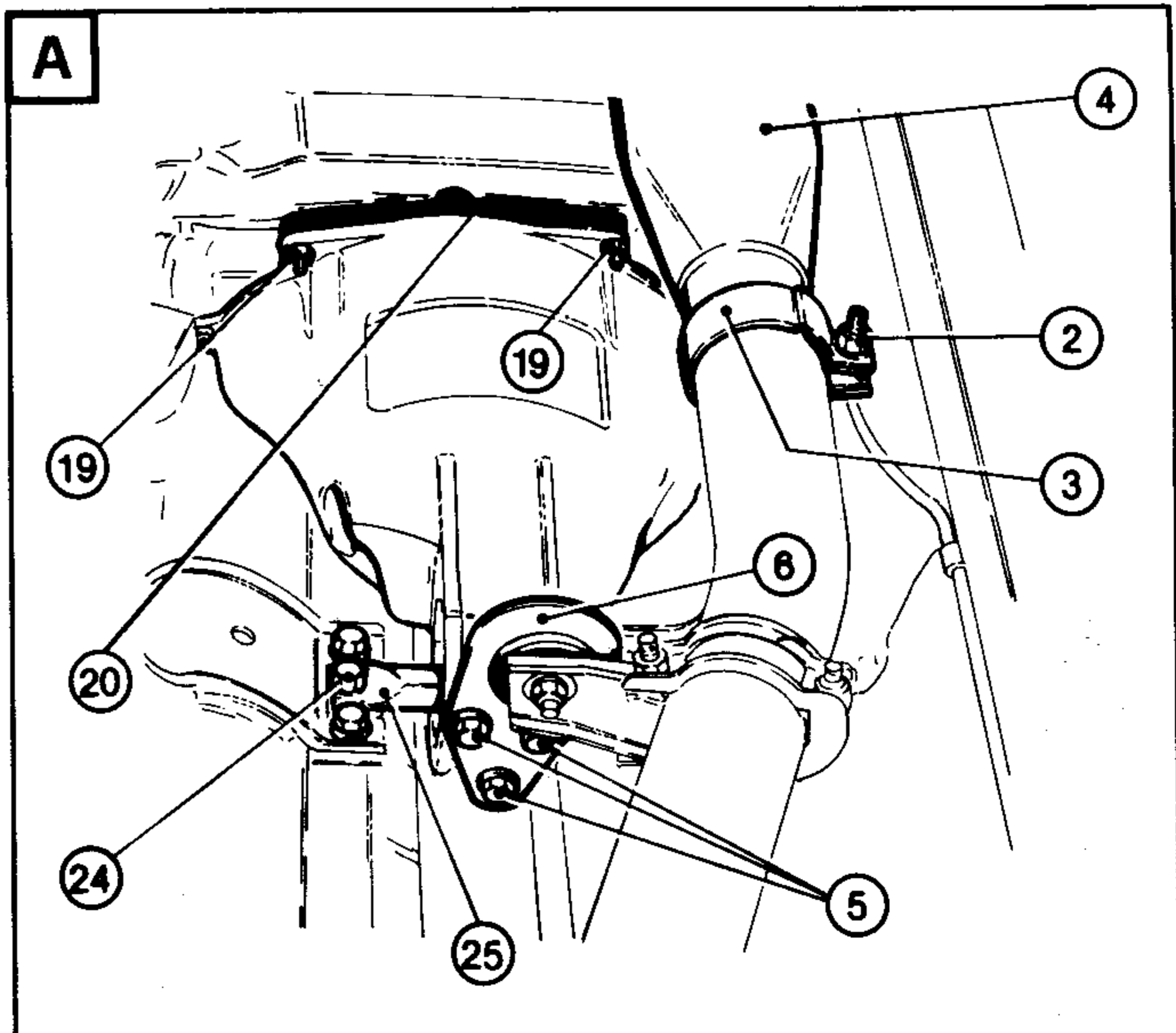
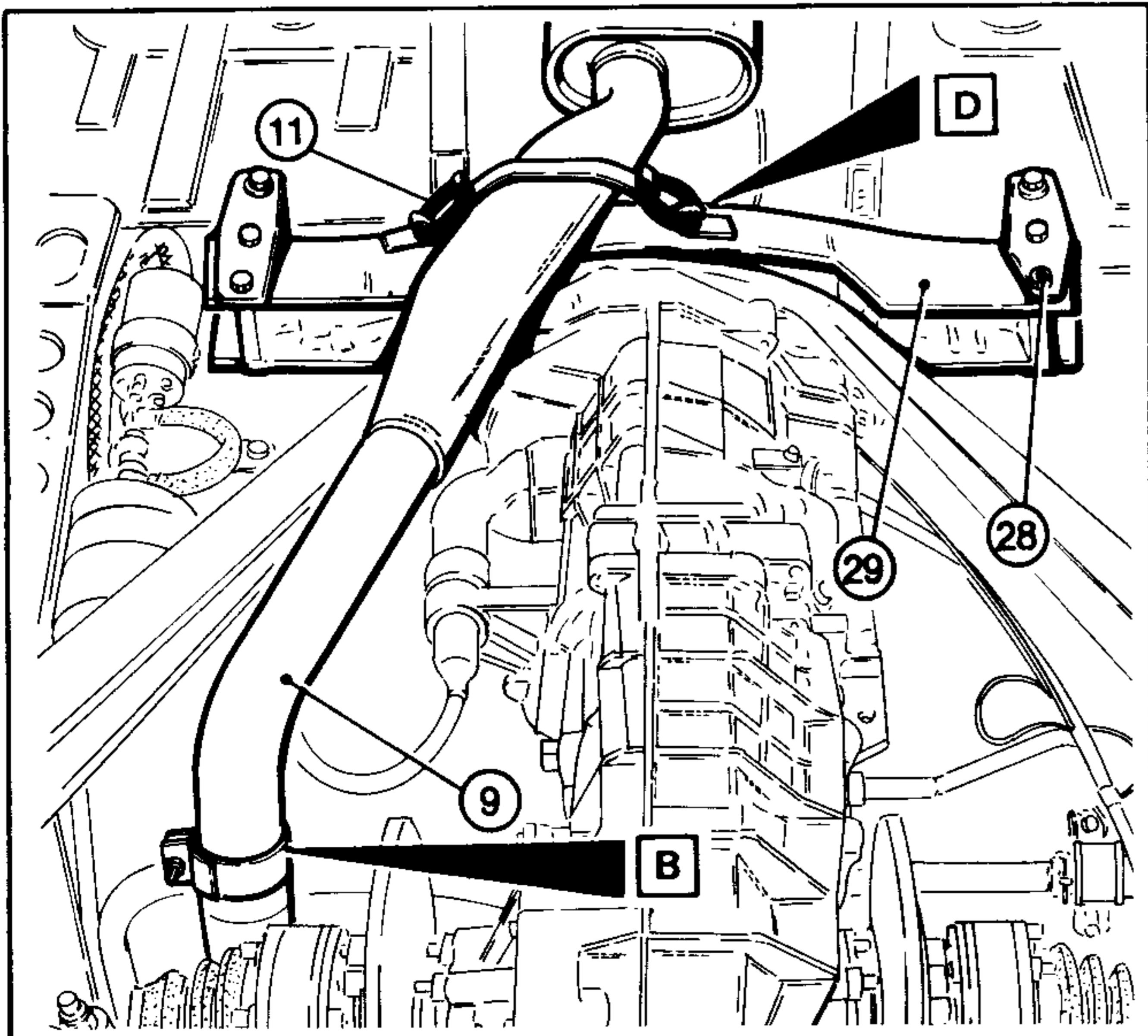
FRONT SECTION



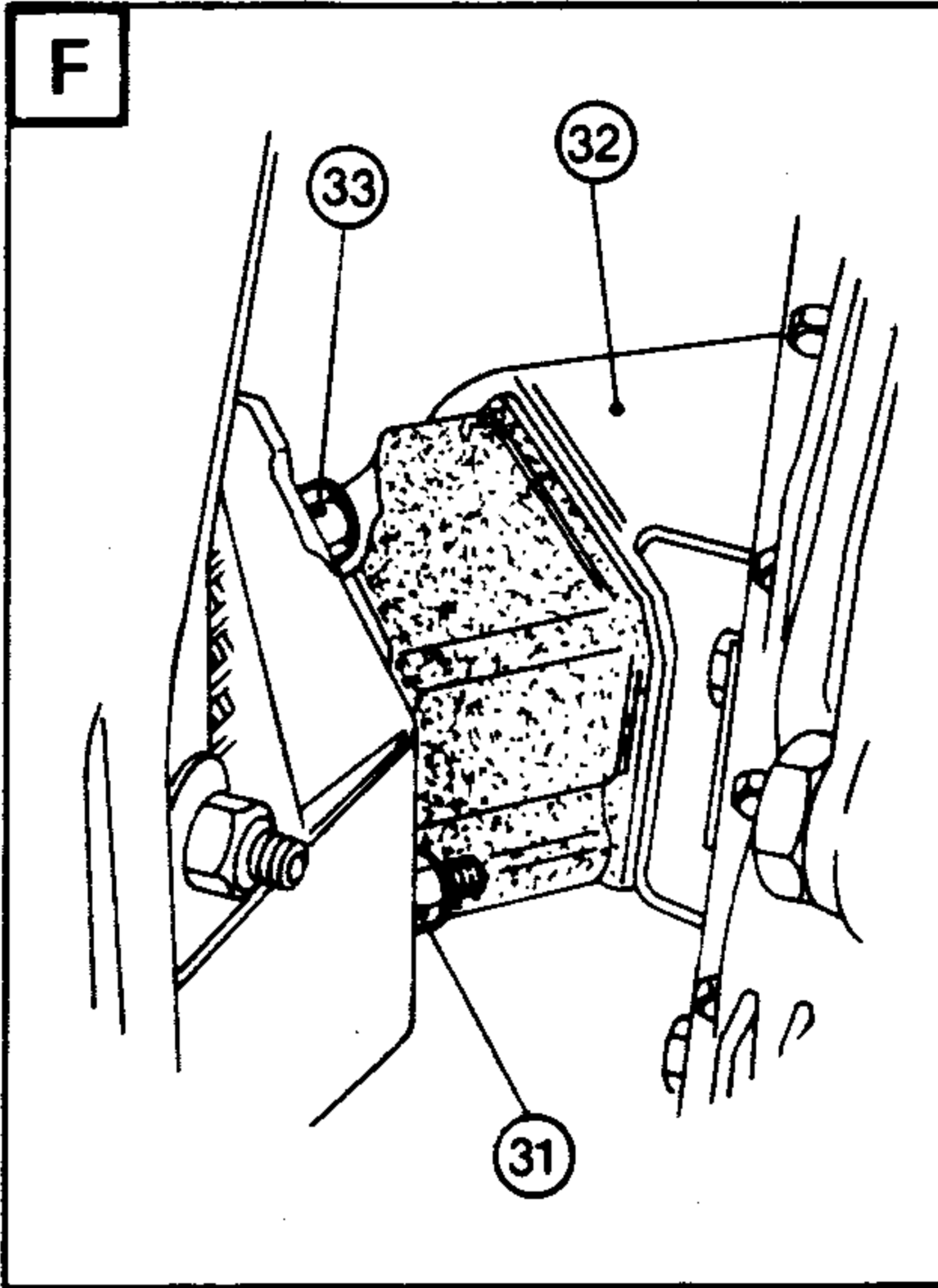
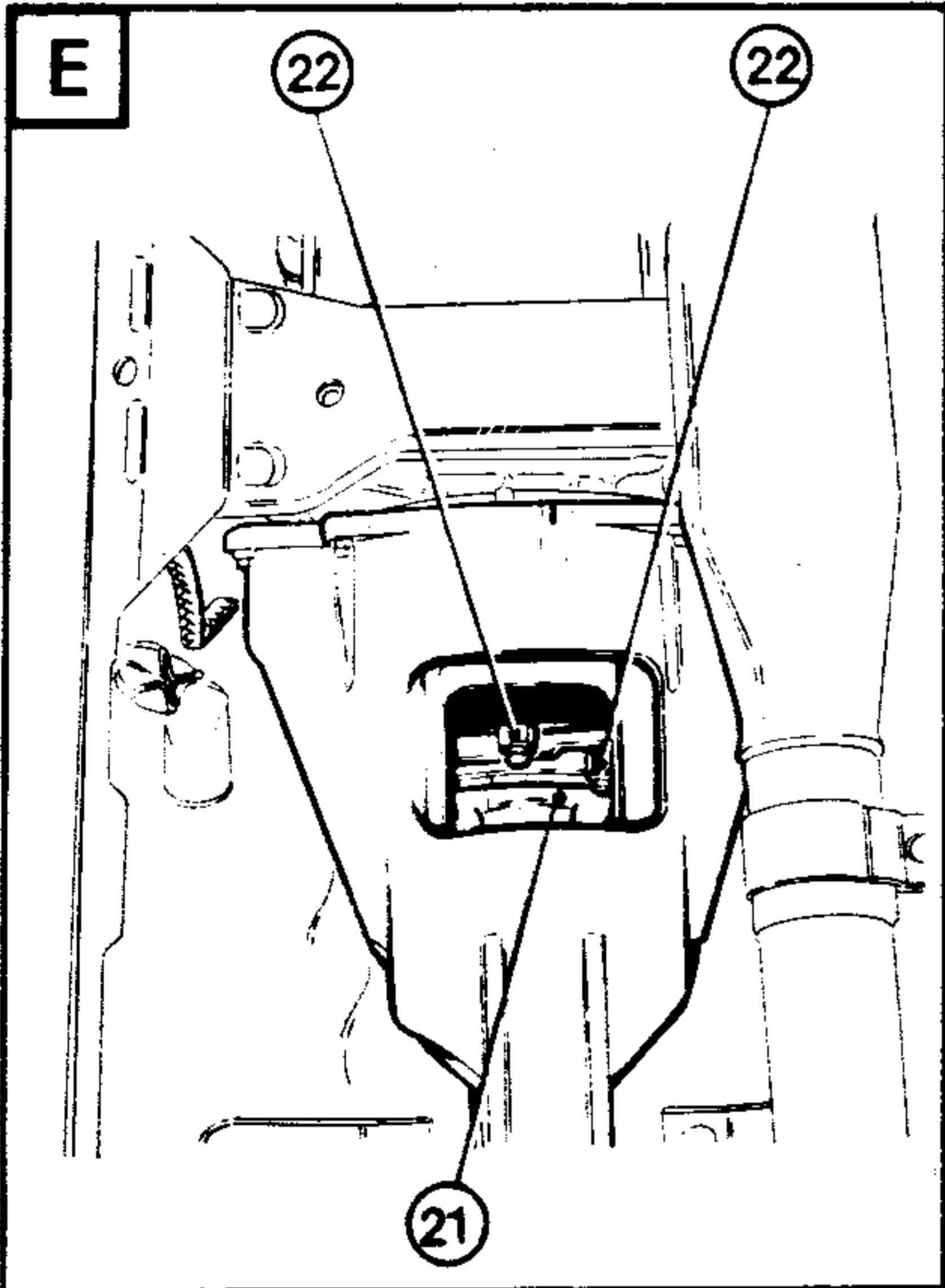
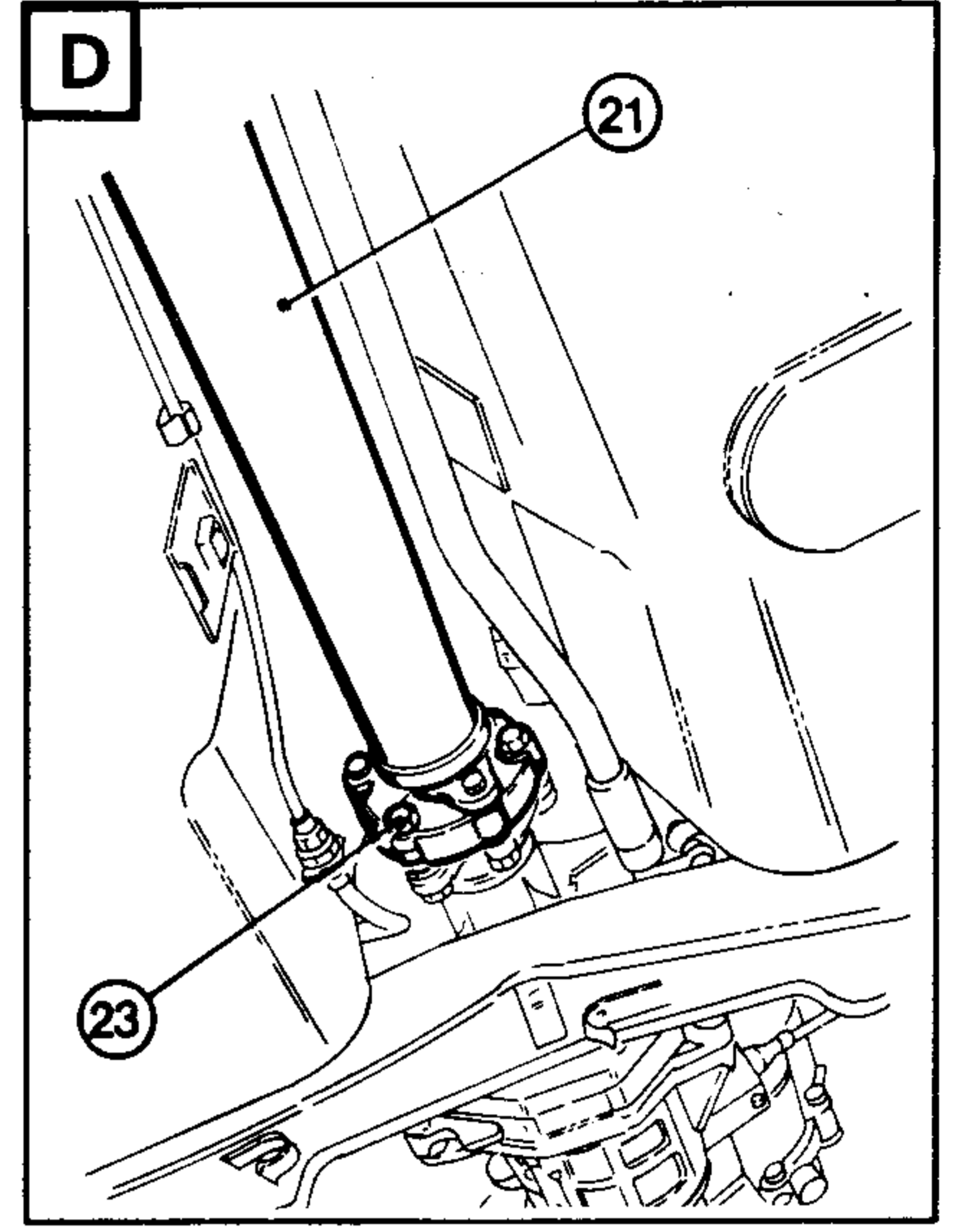
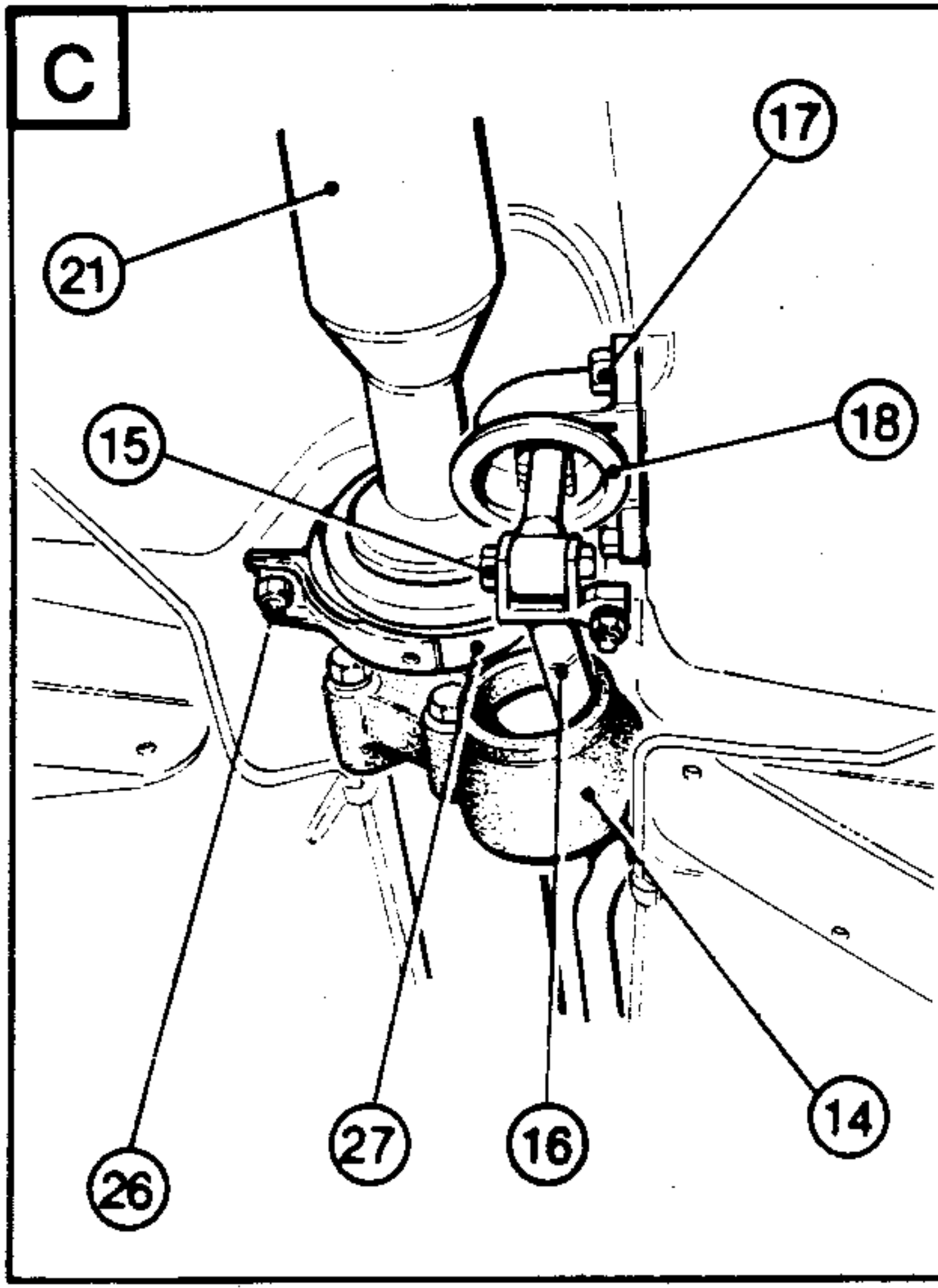
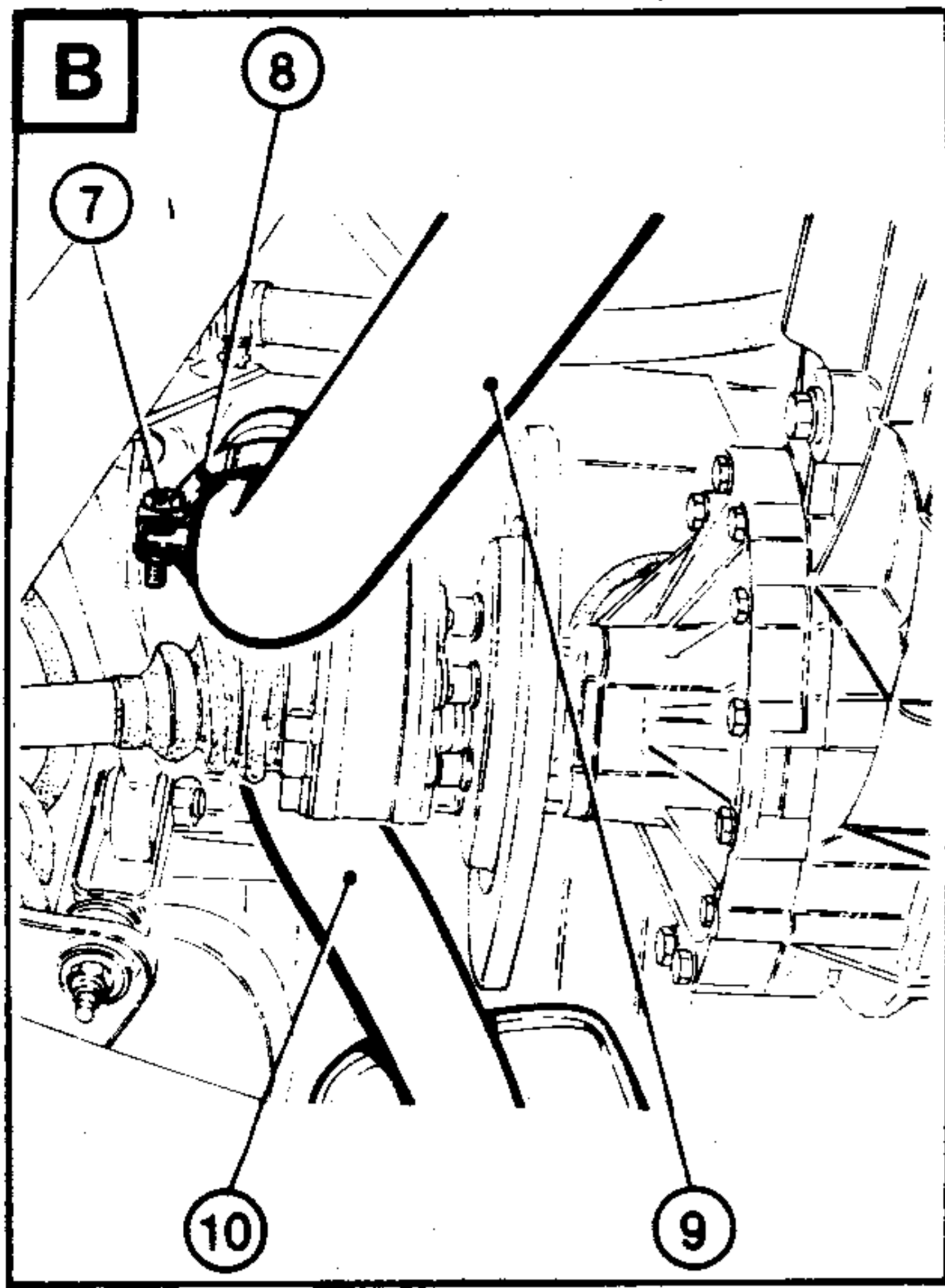
CENTRE SECTION



REAR SECTION



ENGINE MAIN MECHANICAL UNIT



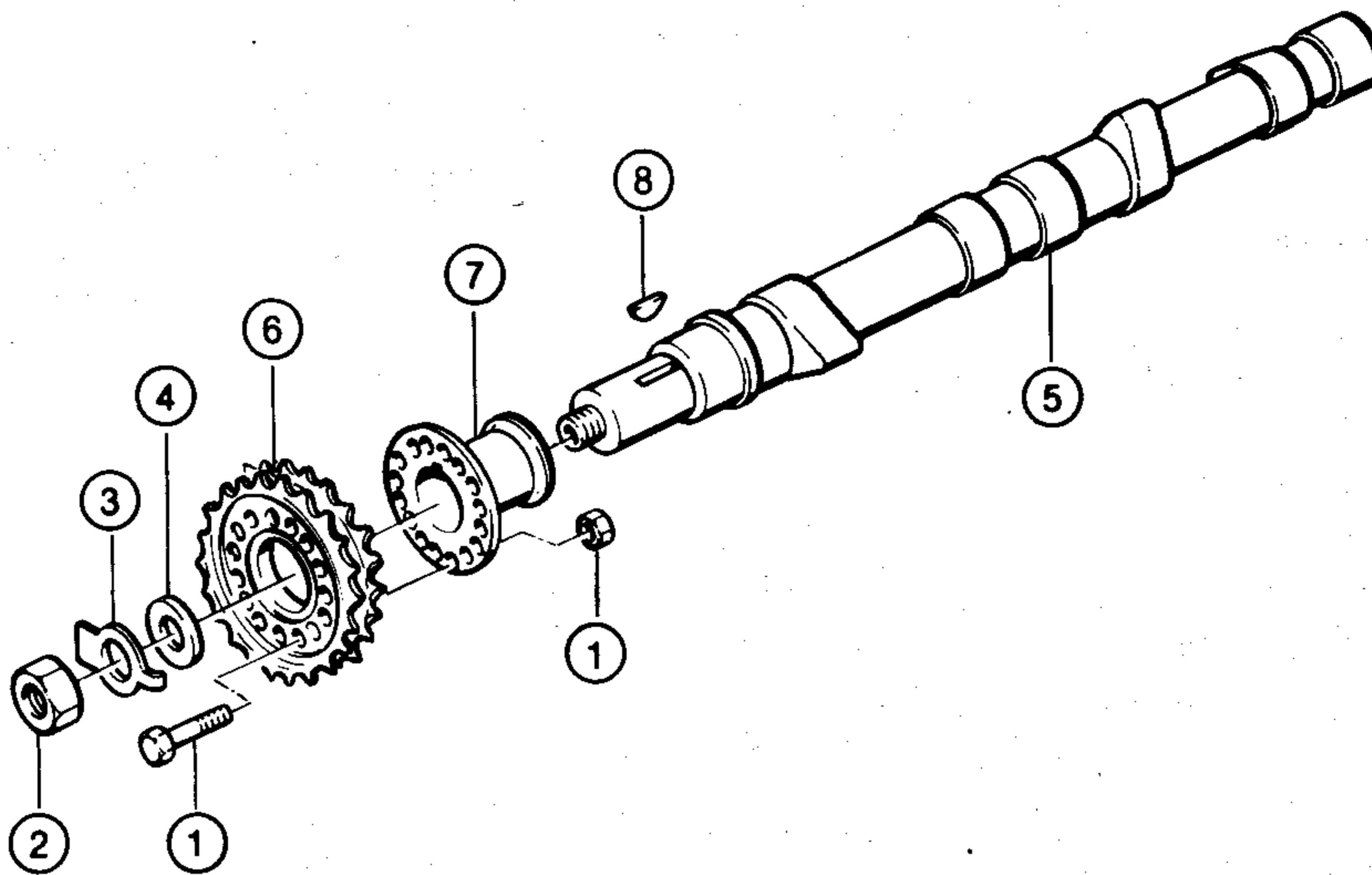
1. Oil drain plug
2. Clamp nut
3. Clamp
4. Exhaust pipe front section
5. Bracket retaining screws
6. Exhaust pipe centre section support bracket
7. Clamp nut
8. Clamp
9. Exhaust pipe centre section
10. Tail pipe
11. Exhaust pipe centre section rubber support rings
12. Cross member
13. Cross member retaining screws
14. Boot
15. Retaining bolt
16. Gear rod

17. Support retaining screws
18. Gear lever support
19. Guard retaining bolts
20. Flywheel guard
21. Transmission shaft
22. Front flexible coupling retaining nuts
23. Rear flexible coupling retaining bolts
24. Pin retaining bolts
25. Engine rear support pin
26. Propeller shaft centre support retaining nuts
27. Propeller shaft centre support
28. Rear crossmember retaining screws
29. Rear crossmember
30. Ground cable
31. Engine side mount lower retaining nuts
32. Engine side mounts
33. Engine side mount upper retaining screws

ENGINE MAIN MECHANICAL UNIT

g. Remove the following parts from camshafts (5):

- Bolt (1).
- Nut (2), lockwasher (3) and washer (4) on drive gear.
- Gear (6), flange (7) and woodruff key (8).



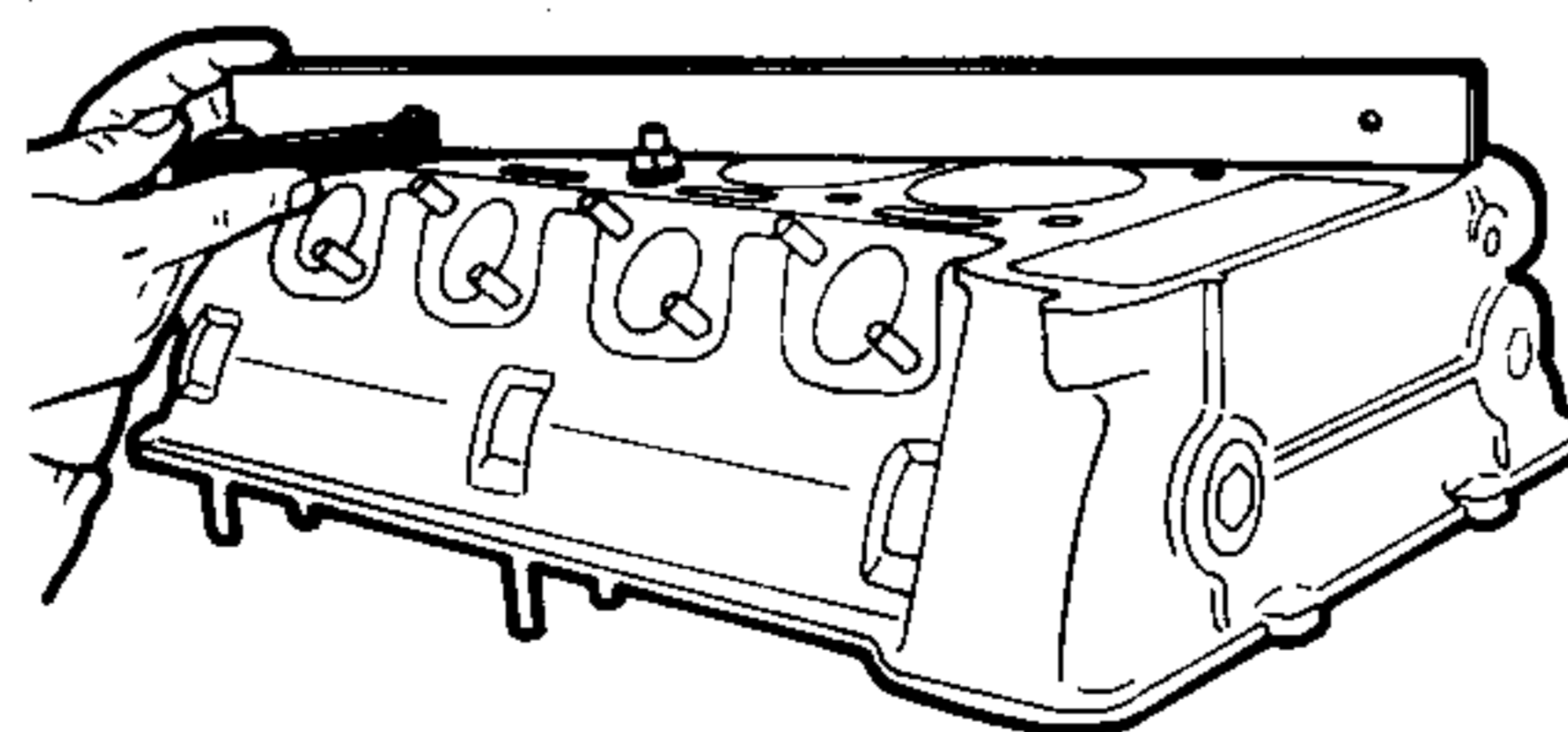
1. Bolt
2. Nut
3. Lockwasher
4. Washer
5. Camshaft
6. Drive gear
7. Flange
8. Woodruff key

CHECKS AND INSPECTION

CYLINDER HEADS AND VALVES

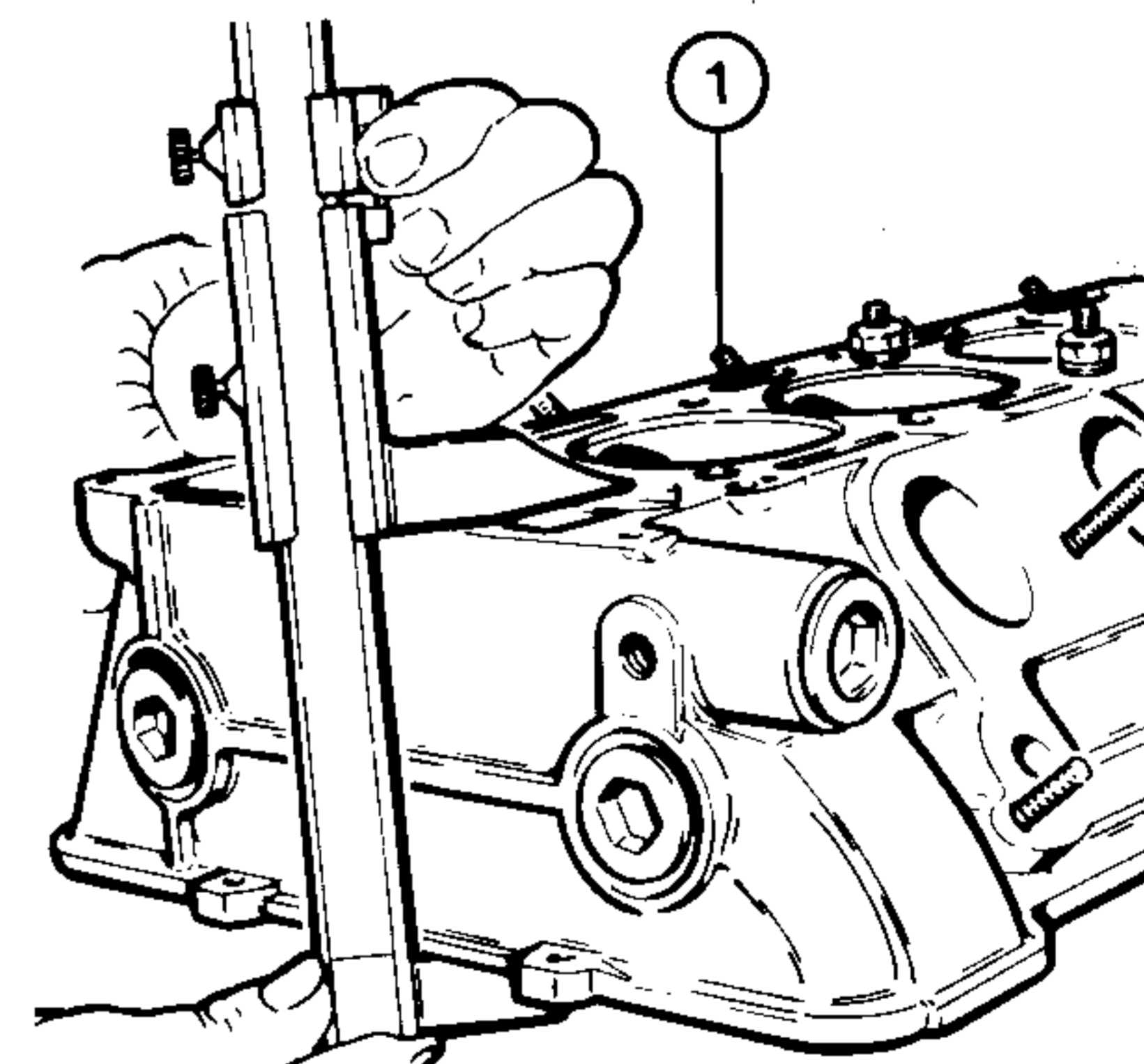
CYLINDER HEAD SEALING SURFACE INSPECTION

- a. Thoroughly clean head surfaces using butyl acetate or methylethylketone to remove any gasket fragments.
- b. Visually inspect head for cracks or other defects.
- c. Check head sealing surface for warpage using a straightedge and feeler gauge positioned as shown.



Maximum flatness error of cylinder head sealing surface: 0.05 mm (0.002 in)

- d. In the event of excessive warpage, head must be refaced. Before refacing, remove the four exhaust manifold studs (1).



1. Studs

Minimum cylinder head height after refacing: 111.5 mm (4.390 in)

Do not machine head below the minimum allowable thickness, otherwise severe engine damage might result.

e. Check finish of machined surface.

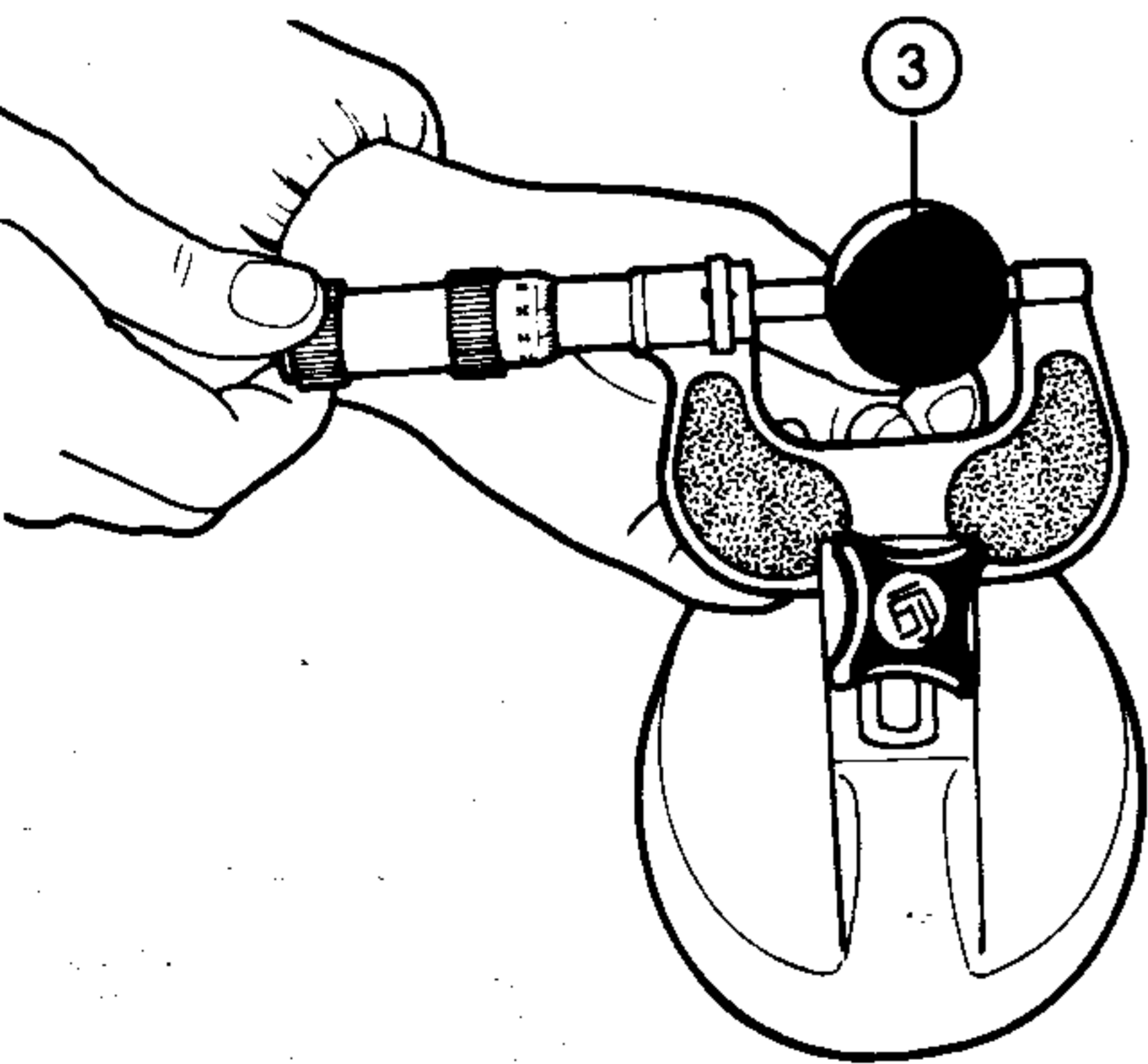
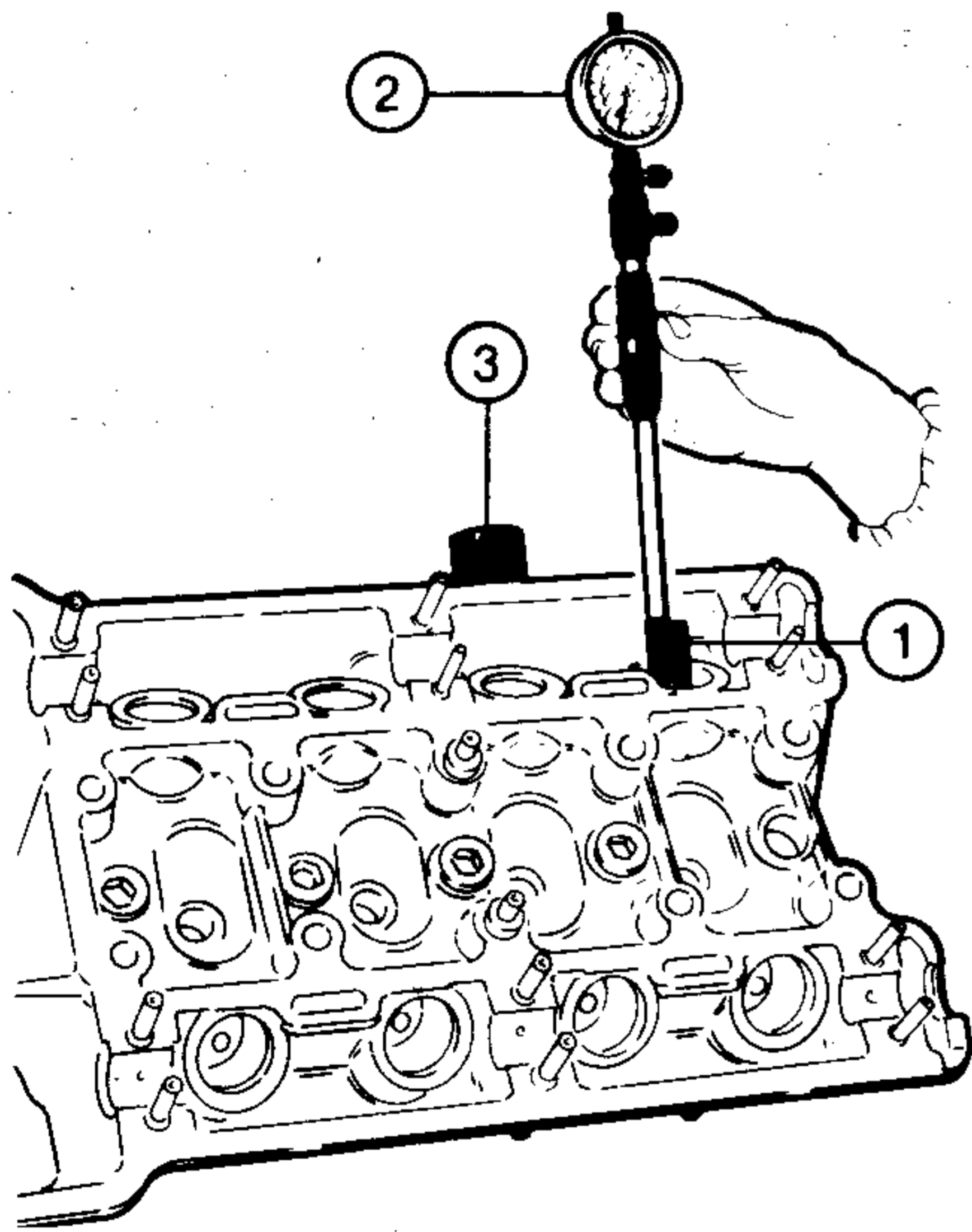
Maximum allowable surface roughness:
1.6 μm (63 microinch)

Head top and bottom faces must be parallel to within:
0.087 mm (0.0034 in)

TAPPETS AND TAPPET HOUSING BORES

a. Check tappet housing bores using a bore gauge (1) and a dial indicator (2). Compare readings with dimensions and tolerances given in Inspection Specifications Tables.

b. Check tappet skirt and head for signs of scuffing, score marks or excessive wear. Check diameter of tappet (3) using an outside micrometer, referring to Inspection Specifications Tables for dimensions and tolerances.



1. Bore gauge
2. Dial indicator
3. Tappet

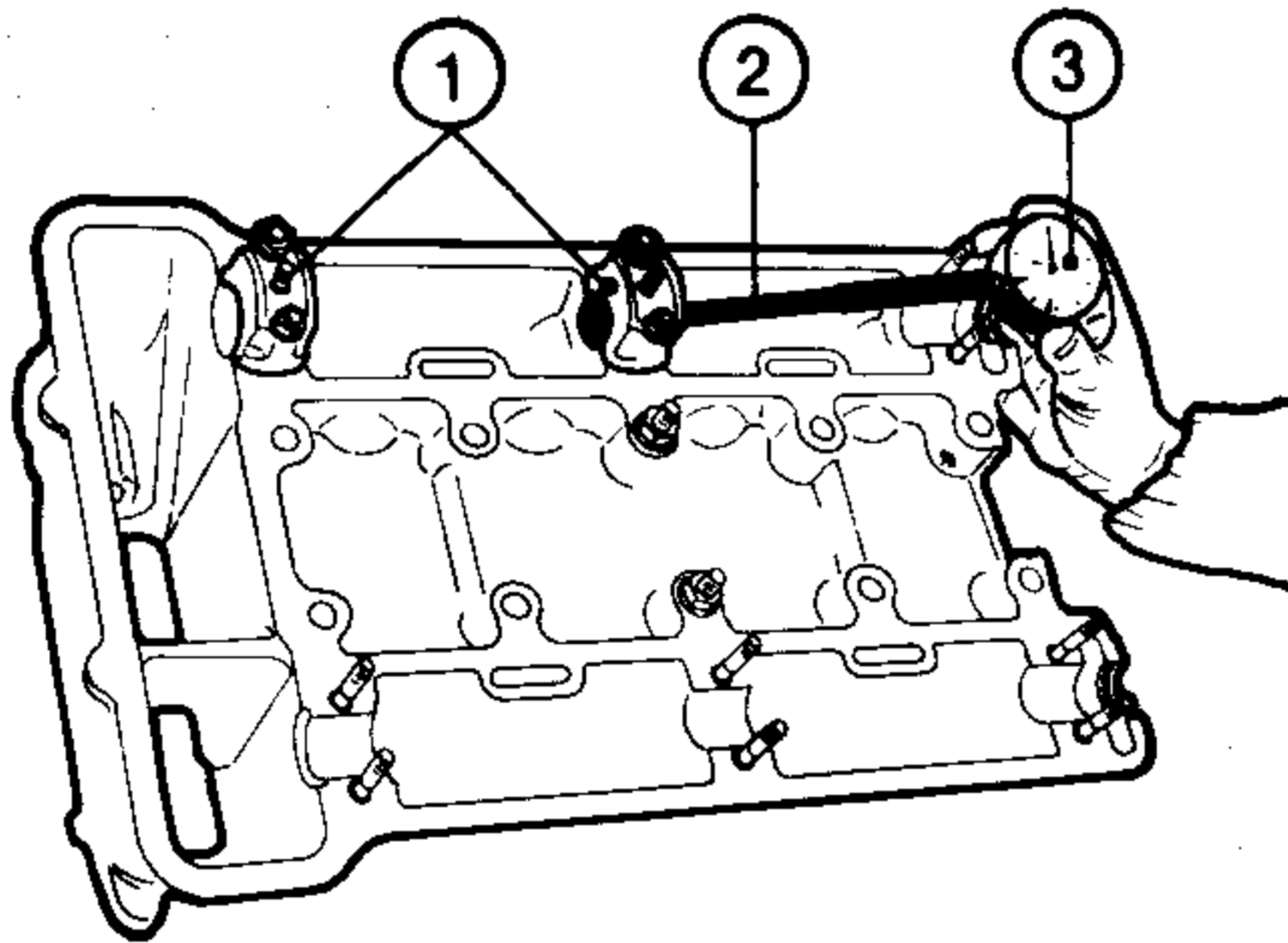
CAMSHAFTS AND CAMSHAFT JOURNAL HOUSING BORES

a. Install caps (1), lubricate nuts, and tighten to the specified torque.

b. Using a bore gauge (2) with dial indicator (3), measure camshaft journal housing bore diameter.

T : Tightening torque
Camshaft cap nuts
20 to 22 Nm
(2 to 2.25 kgm
14.7 to 16.2 ft.lb)

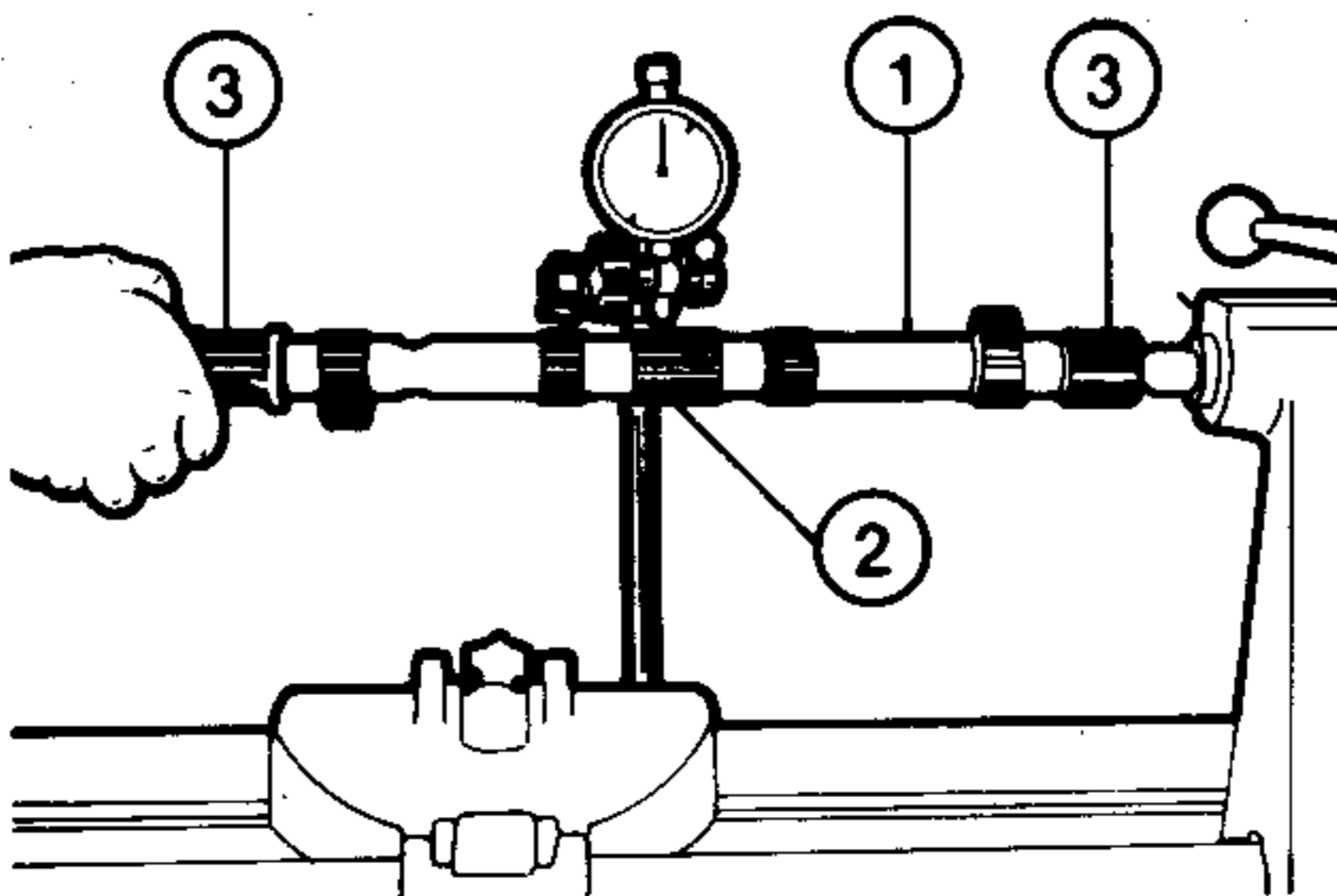
Camshaft journal housing bore diameter:
27.000 to 27.033 mm
(1.0630 to 1.0643 in)



1. Caps
2. Bore gauge
3. Dial gauge

c. Check cam lobes and camshaft journals for score marks, scuffing, signs of overheating or excessive wear.

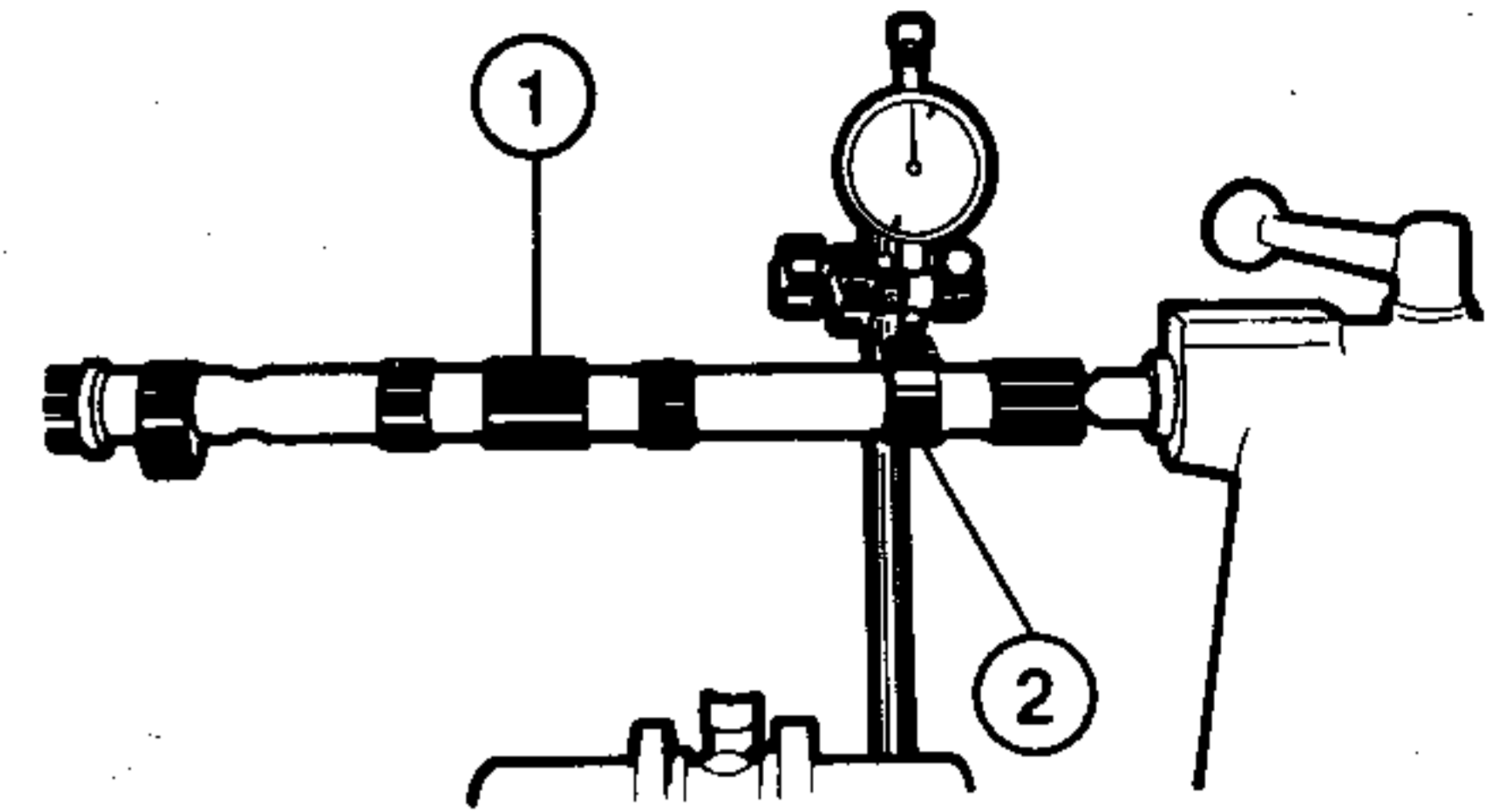
d. Measure camshaft journal diameter using an outside micrometer. Check for out-of-round condition using a dial gauge.



1. Camshaft
2. Center journal
3. End journals

Camshaft journal diameter:
26.959 to 26.980 mm
(1.0614 to 1.0622 in)

e. Check height of cam lobes using a dial indicator. Scrap and replace camshaft if height falls below requirements.



1. Camshaft
2. Cam

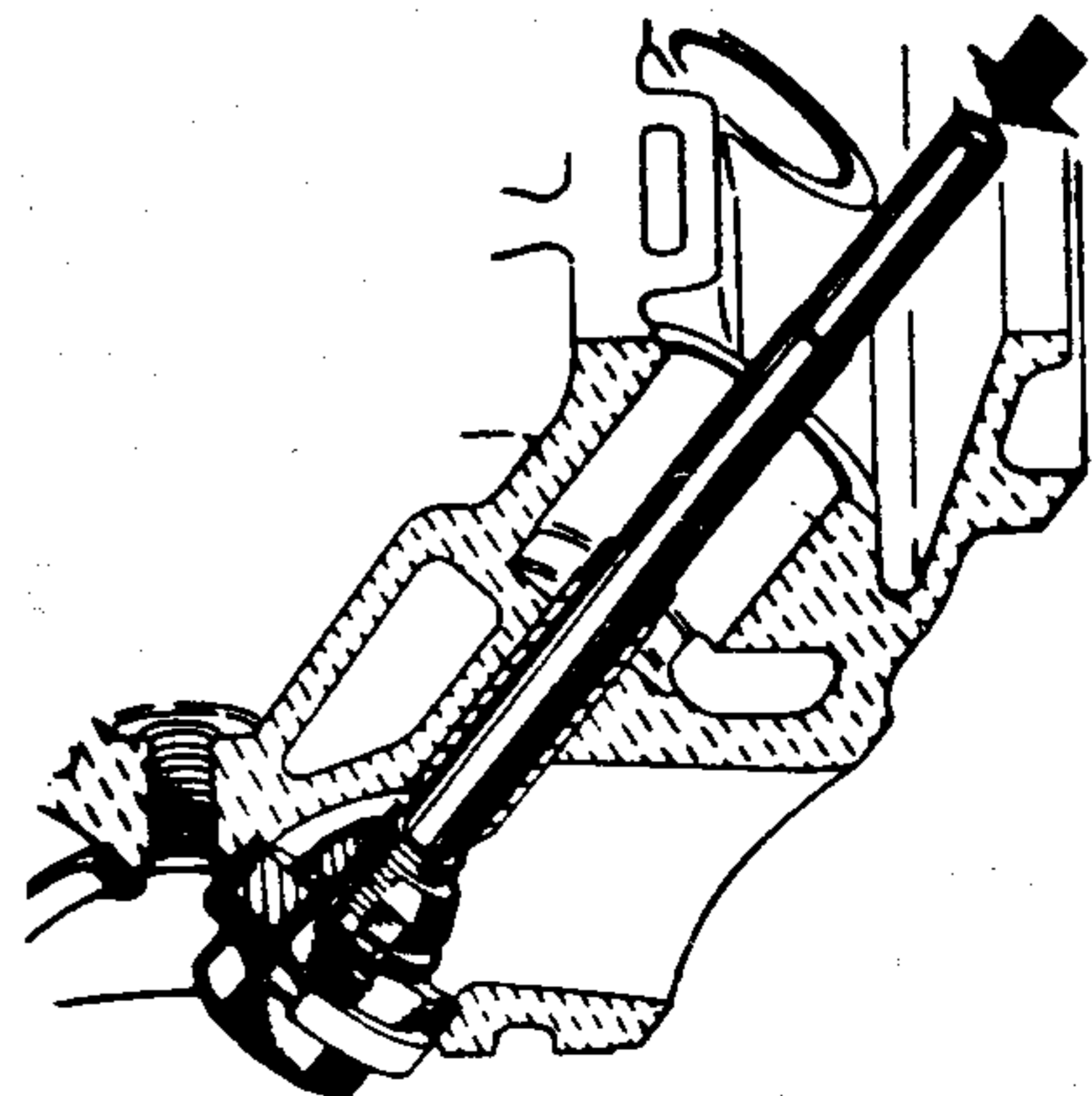
Minimum cam lobes height mm (in)				
Cam	Engine			
	016.00	016.78 016.55	017.13 061.00 062.02 062.12	061.34
i.	9 (0.35)	9.5 (0.37)	11 (0.43)	8 (0.31)
e.	9 (0.35)	9.5 (0.37)	9 (0.35)	9 (0.35)

i. = intake valve cam
e. = exhaust valve cam

VALVE SEAT INSERT REPLACEMENT

a. Check seat inserts for nicks, cracks or burn marks, and ensure that they are firm in housing bores. Replace if necessary.

b. To remove seat inserts, use a suitable tool as shown below.



c. Prior to installing new seat inserts, check insert and housing bore dimensions against specifications shown in table.