

STANDARD EXCHANGE ENGINE

1 - Preparation of the old engine for return

Clean the engine.

Drain the oil and coolant from the old engine.

Secure the old engine to the stand and in the same conditions as the standard exchange engine:

- fit plastic plugs and covers,
- fit the cardboard cover over the whole assembly.

2 - Parts to leave on the old engine

Parts to leave on the old engine or to include in the return box:

- the dipstick,
- the oil filter,
- the oil filter seat,
- the oil cooler,
- the oil level sensor,
- the rocker cover,
- the coolant pump,
- the vacuum pump,
- the high-pressure pump,
- the injector rail,
- the injectors,
- the heater plugs,
- the entire timing end (crankshaft sprocket, belt, tensioner, camshaft sprocket),
- the timing covers,
- the crankshaft accessories pulley,
- the flywheel or the drive plate,
- the clutch pressure plate and driven plate,
- the lifting eyes,
- the cylinder head suspended mounting.

3 - Parts to remove from the old engine

Parts to remember to remove from the old engine:

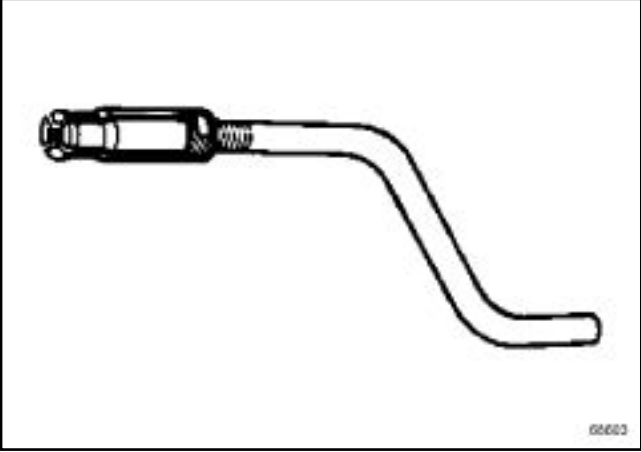
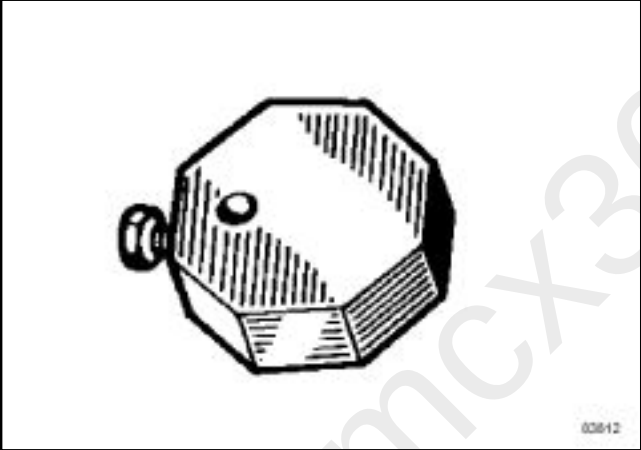
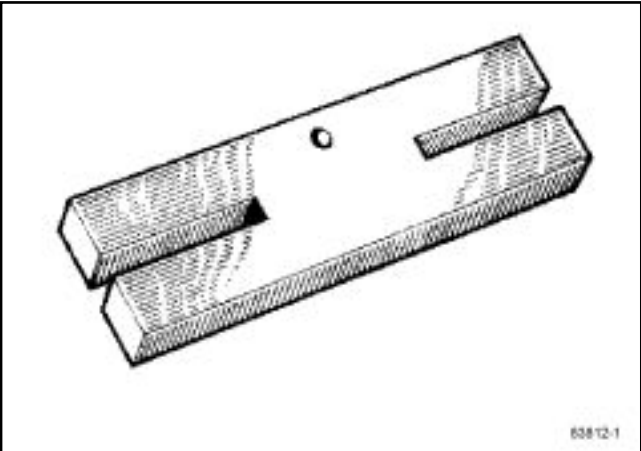
- all the coolant system pipes,
- the oil pressure switch,
- the pinking sensor,
- the coolant inlet hose,
- the coolant outlet unit,

- the inlet manifold,
- the exhaust manifold,
- the turbocharger,
- the exhaust gas recirculation valve,
- the catalytic converter,
- the accessories (alternator, air conditioning compressor, power-assisted steering pump),
- the accessories multifunction support.

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

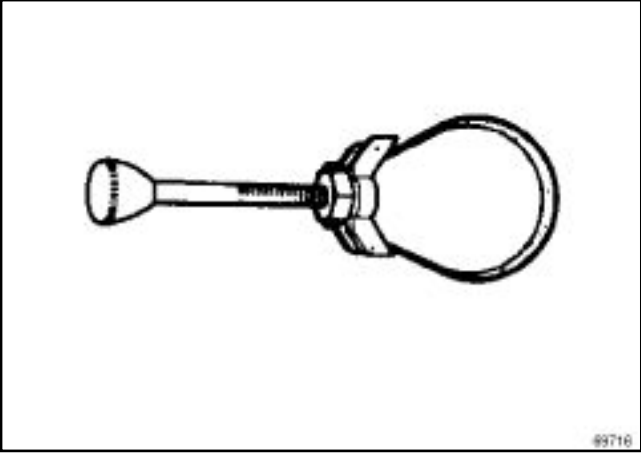
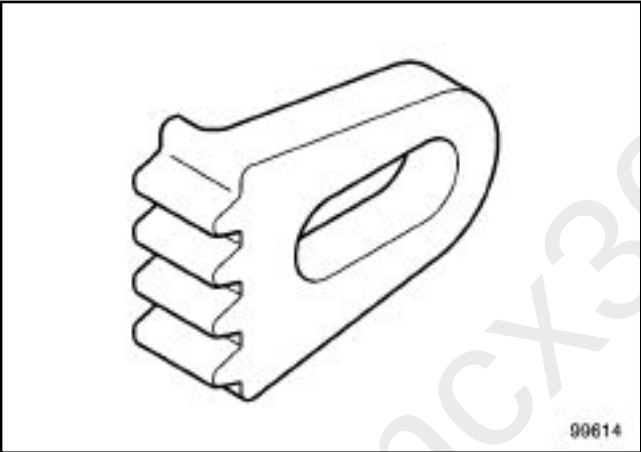
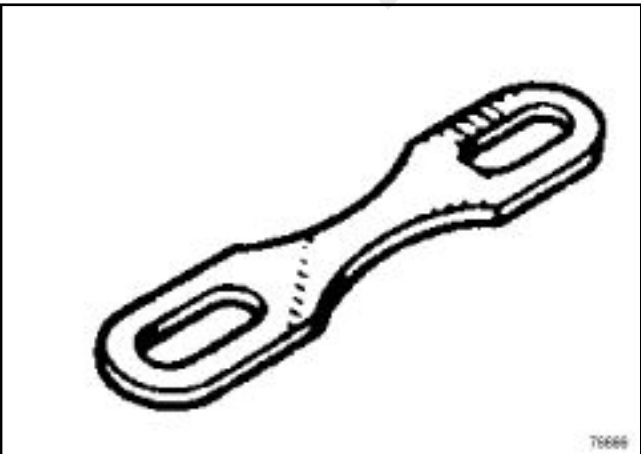
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Illustration	Tool number	Tool part number	Description
 68603	Mot. 11	No longer available from the Parts Department (see Equipment required)	Crankshaft spigot bush extractor
 83812	Mot. 251-01	00 00 025 101	Dial gauge support used with Mot. 252-01
 83812-1	Mot. 252-01	00 00 025 201	Pressure plate for measuring piston protrusion, which is to be used with Mot. 251-01 .

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

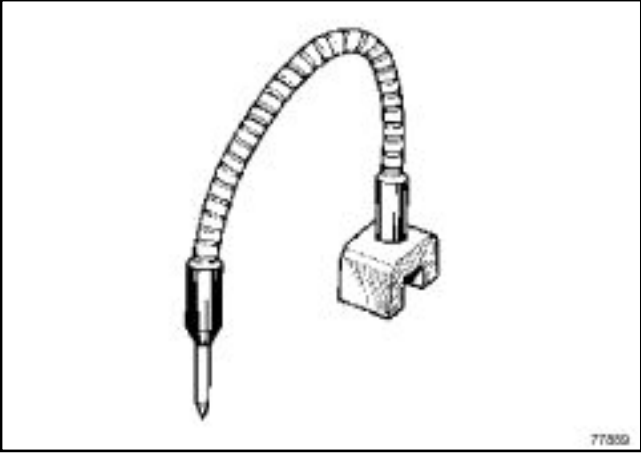
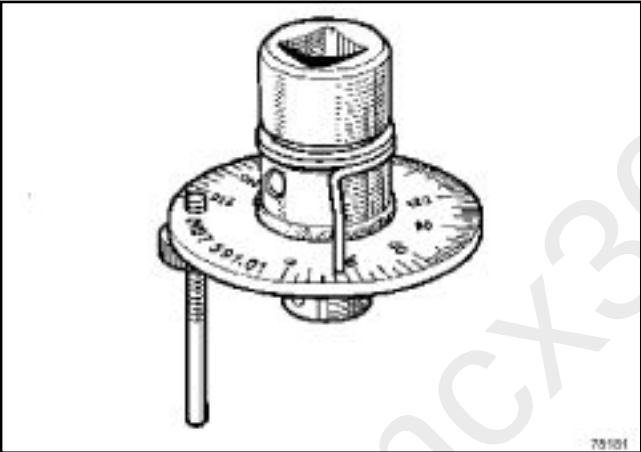
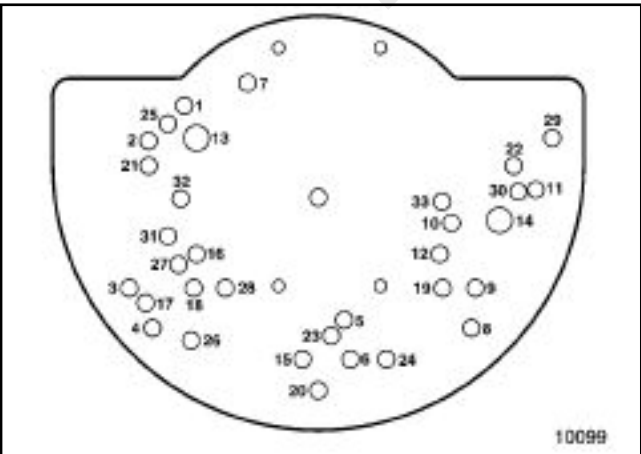
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Illustration	Tool number	Tool part number	Description
 69716	Mot. 445	00 00 044 500	Oil filter strap wrench.
 99614	Mot. 582-01	00 00 058 201	Flywheel locking tool.
 76666	Mot. 588	00 00 058 800	Cylinder block liner clamps.

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

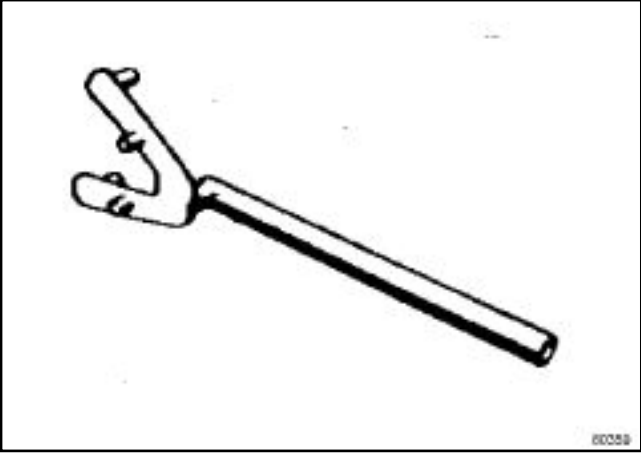
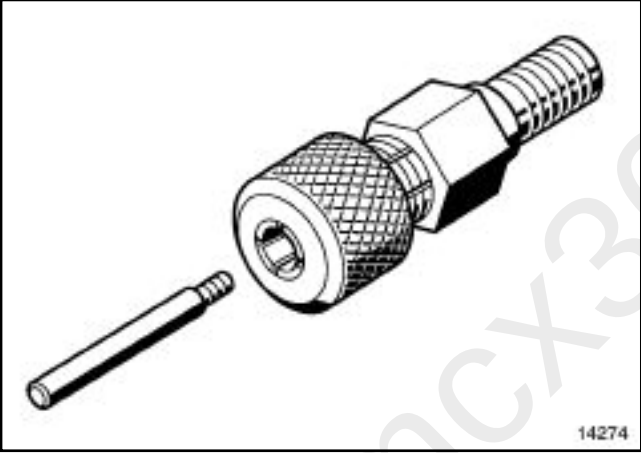
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Illustration	Tool number	Tool part number	Description
 77889	Mot. 591-02	00 00 059 102	Magnetic hose for angle tightening.
 78181	Mot. 591-04	00 00 059 104	Cylinder Head bolt tightening gauge (1/2" drive).
 10099	Mot. 792-03	00 00 079 203	Engine stand plate.

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

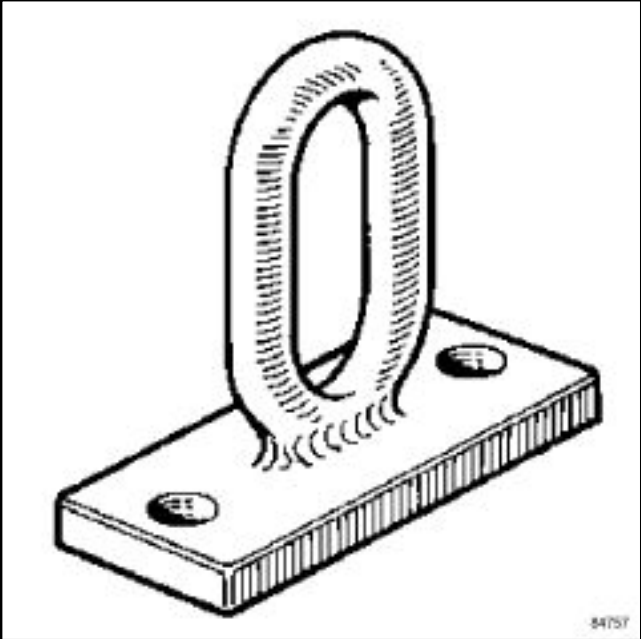
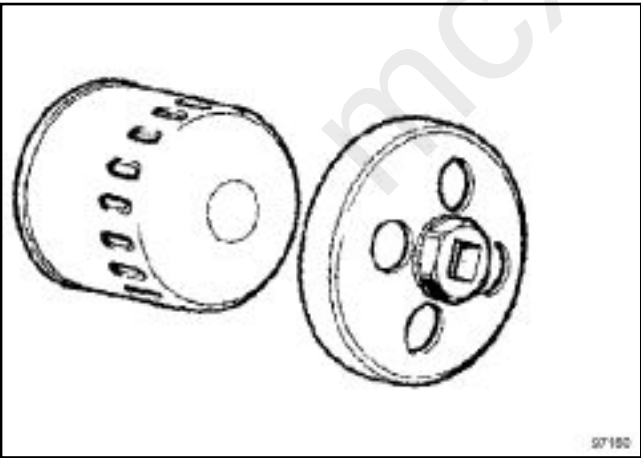
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Illustration	Tool number	Tool part number	Description
 80359	Mot. 799-01	00 00 079 901	Pinion locking tool.
 14274	Mot. 856-02	00 00 085 602	Dial gauge support.

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

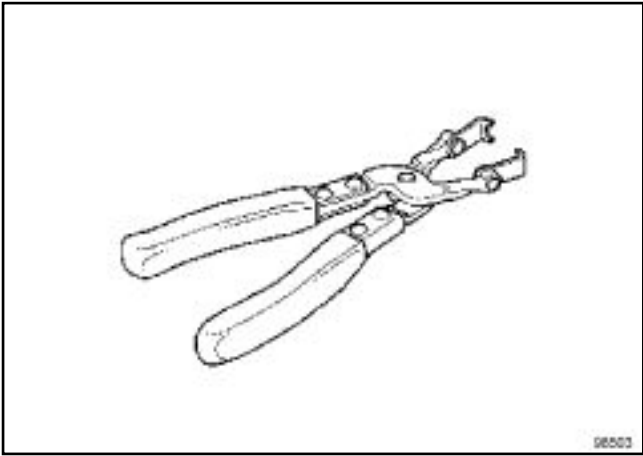
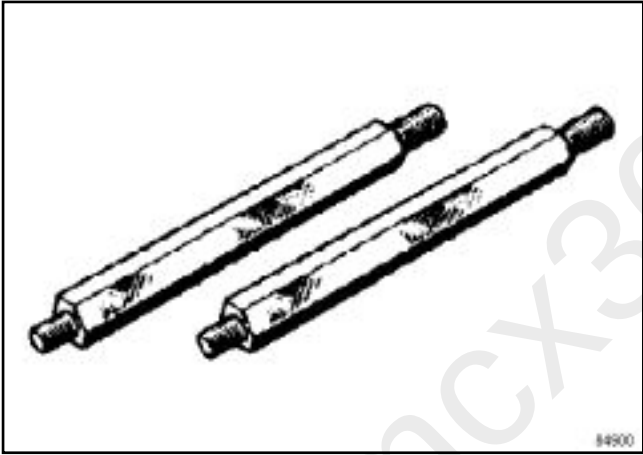
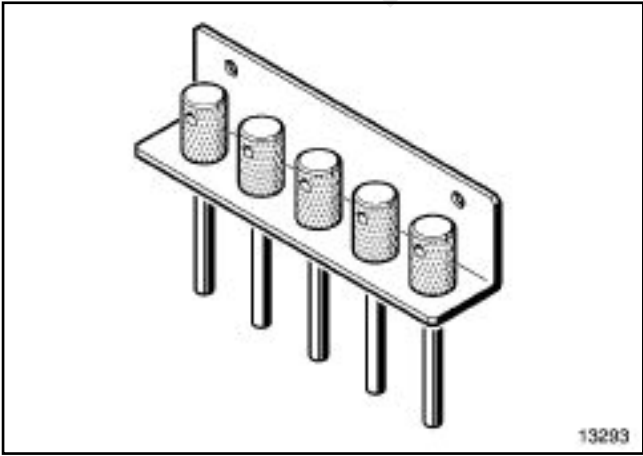
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Illustration	Tool number	Tool part number	Description
 84757	Mot. 923	00 00 092 300	Engine lifting eye.
	Mot. 1018	00 00 101 800	Oil change wrench
	Mot. 1319-01	00 00 131 901	Crankpin height measuring tool.
 97160	Mot. 1329	00 00 132 900	Oil filter removing tool - 76mm diameter.

ENGINE AND LOWER ENGINE ASSEMBLY

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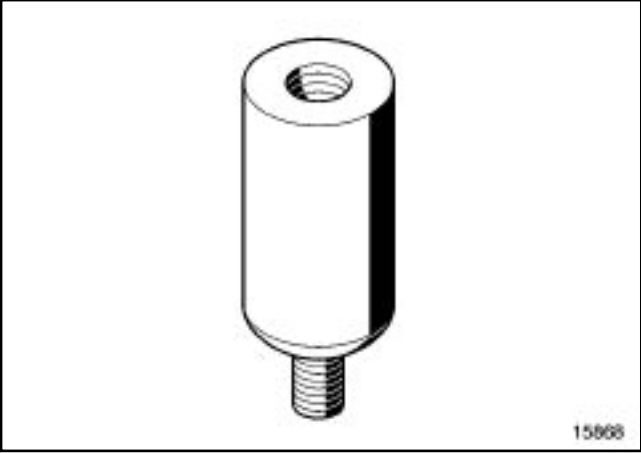
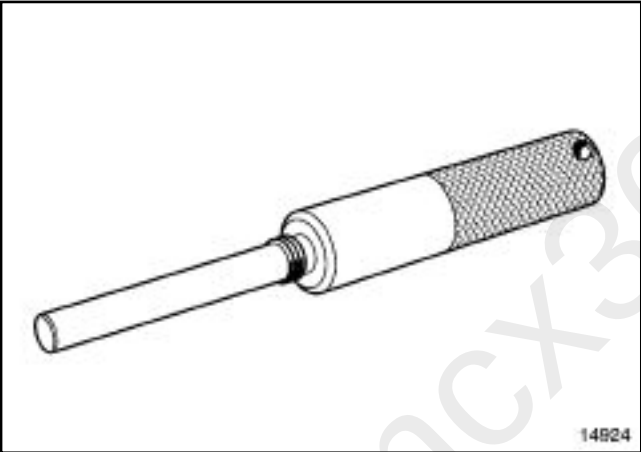
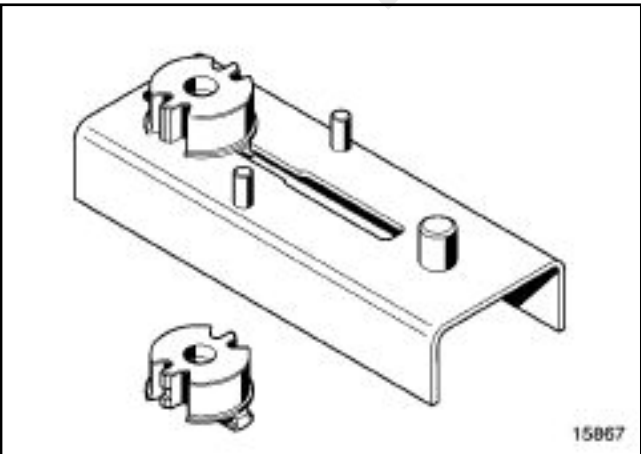
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Illustration	Tool number	Tool part number	Description
 98503	Mot. 1335	00 00 133 500	Pliers for removing valve stem seals.
 84900	Mot. 1378	00 00 137 800	Support studs X and Y which can be fitted to the engine stand plate Mot. 792-03 .
 13293	Mot. 1430	00 00 143 000	Pin set for timing adjustment.

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

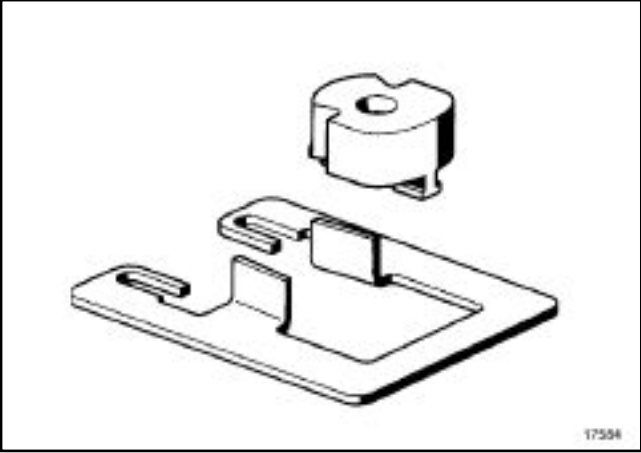
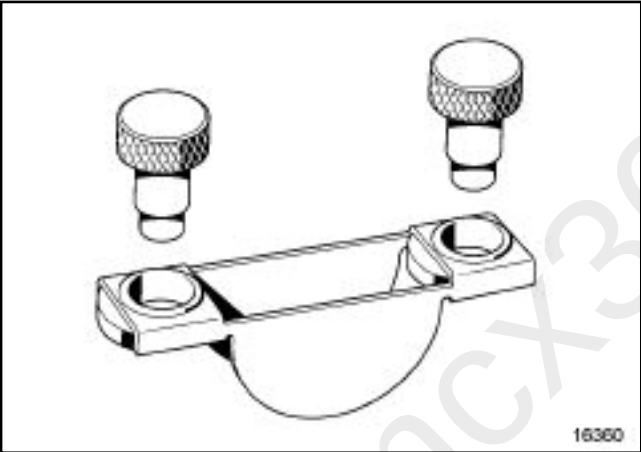
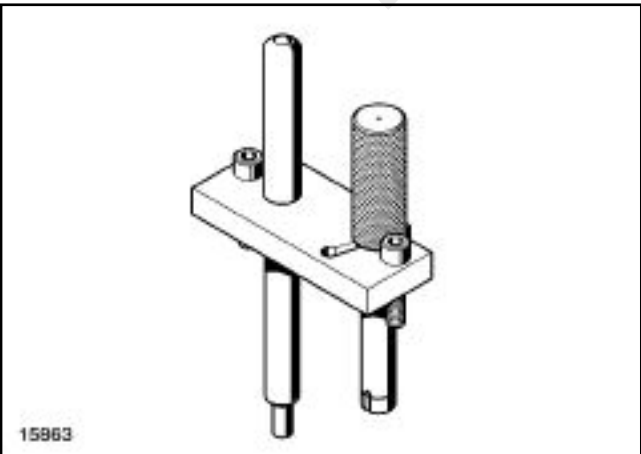
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Illustration	Tool number	Tool part number	Description
 15868	Mot. 1485-01	00 00 148 501	Tool for removing piston cooling jets.
 14924	Mot. 1489	00 00 148 900	TDC setting pin.
 15867	Mot. 1492	00 00 149 200	Tool for fitting main bearing shells.

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Special tooling

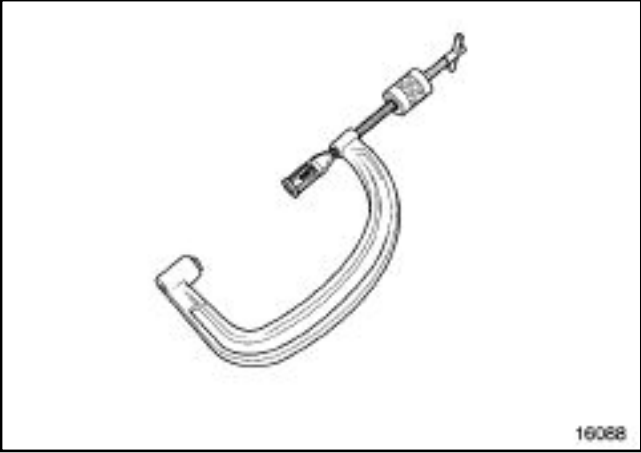
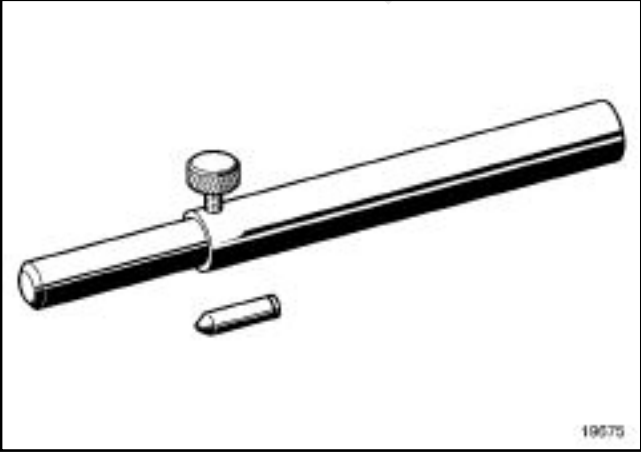
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Illustration	Tool number	Tool part number	Description
 17584	Mot. 1492-03	00 00 149 203	Adapter kit for fitting the con-rod bearing shells.
 16360	Mot. 1493-01	00 00 149 301	Tool for fitting crankshaft bearing shells.
 15863	Mot. 1494	00 00 149 400	Tool for fitting piston cooling jets.

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Special tooling

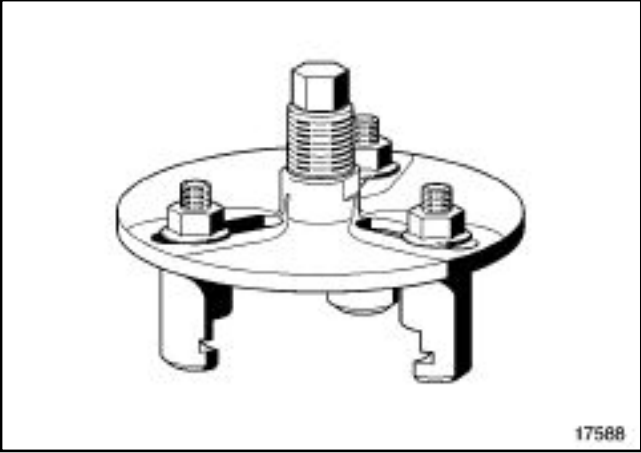
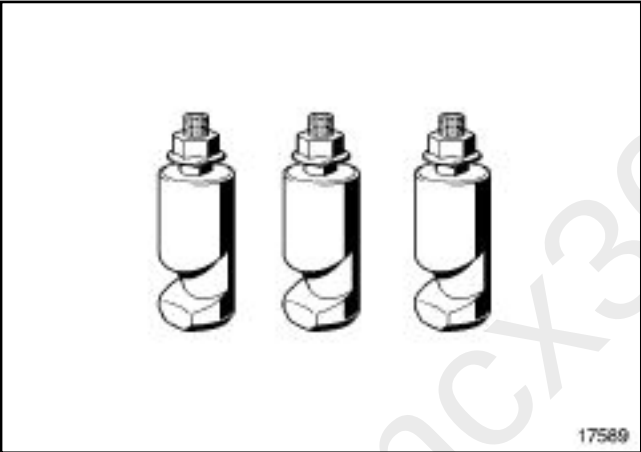
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Illustration	Tool number	Tool part number	Description
 16088	Mot. 1502	00 00 150 200	Valve spring compression tool.
 16171	Mot. 1505	No longer available in the Parts Department, replaced by Mot. 1715	Frequency meter for belt tension.
 19675	Mot. 1511-01	00 00 151 101	Valve stem seal tool.

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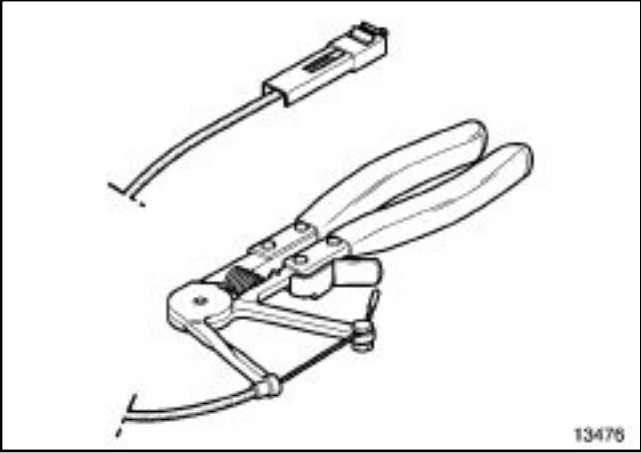
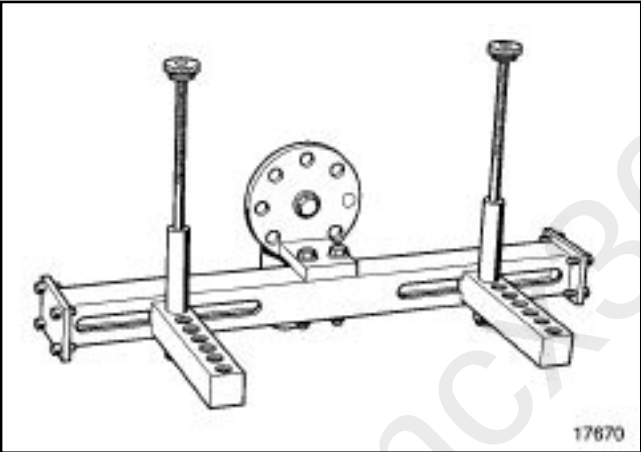
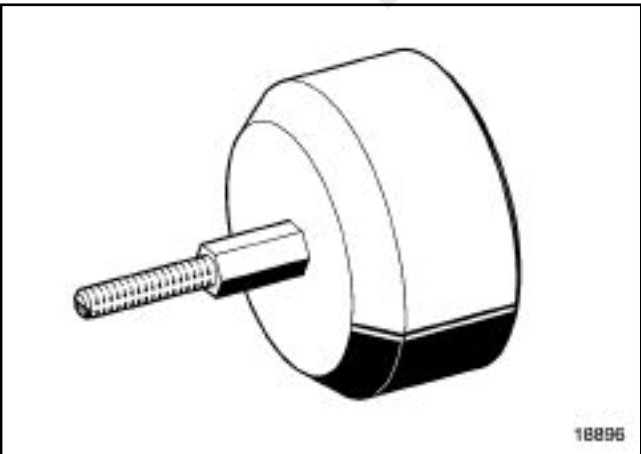
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Illustration	Tool number	Tool part number	Description
 17588	Mot. 1525	00 00 152 500	High pressure pump sprocket extractor.
 17589	Mot. 1525-02	00 00 152 502	High pressure pump sprocket extractor claws.
 19672	Mot. 1566	00 00 156 600	Spanner for high pressure pipe nuts.

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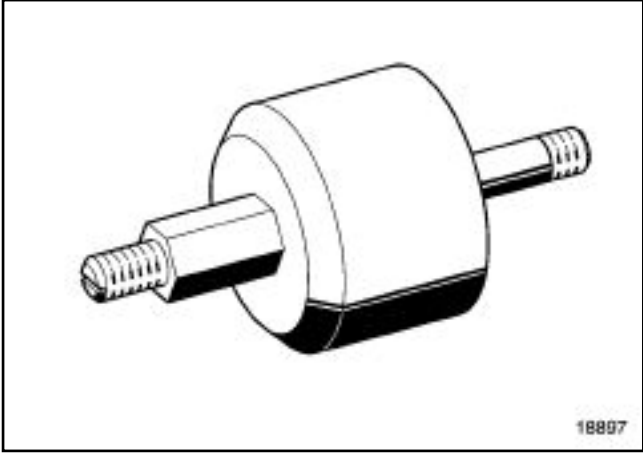
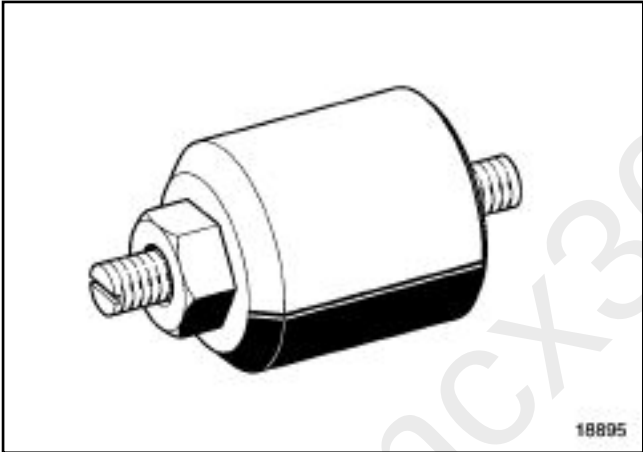
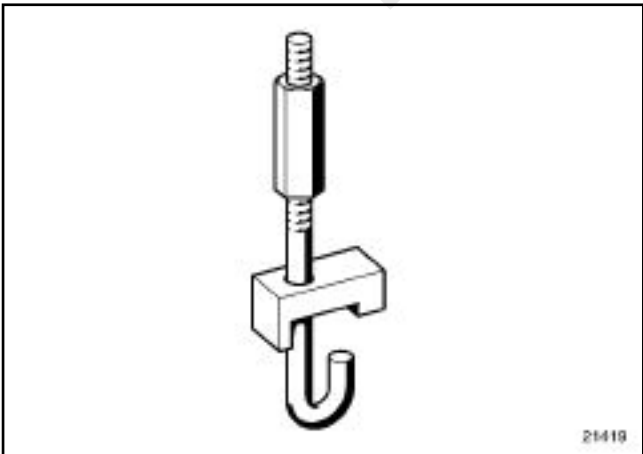
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Illustration	Tool number	Tool part number	Description
 13476	Mot. 1567	00 00 151 300	Long reach EGR clip pliers.
 17670	Mot. 1573	00 00 157 300	Cylinder head support.
 18896	Mot. 1585	00 00 158 500	Tool for fitting crankshaft seal (flywheel end).

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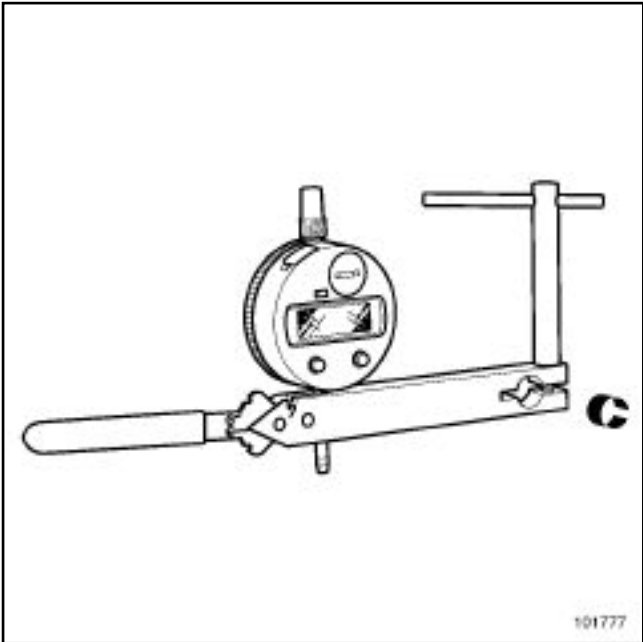
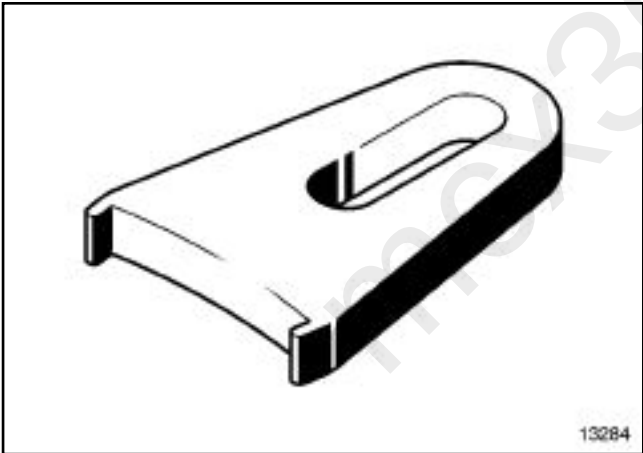
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Illustration	Tool number	Tool part number	Description
 18897	Mot. 1586	00 00 158 600	Tool for fitting crankshaft seal (timing end).
 18895	Mot. 1632	00 00 163 200	Camshaft oil seal fitting tool (timing end).
 21419	Mot. 1638	00 00 163 800	Accessories belt tension tool.

ENGINE AND LOWER ENGINE ASSEMBLY

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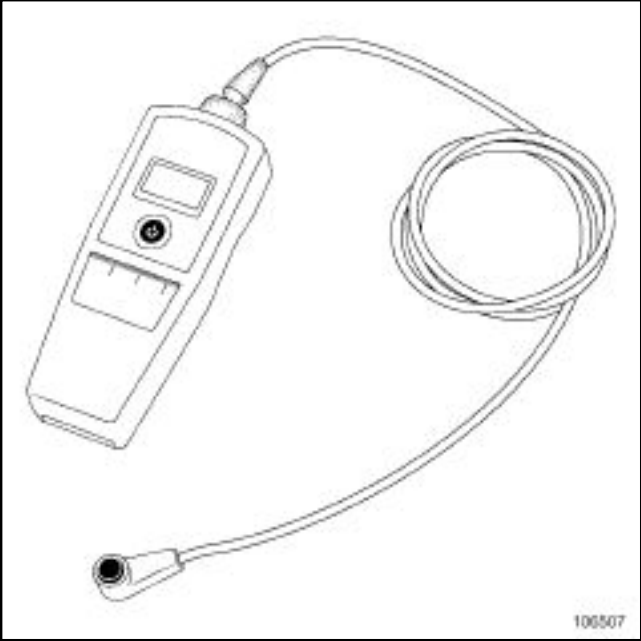
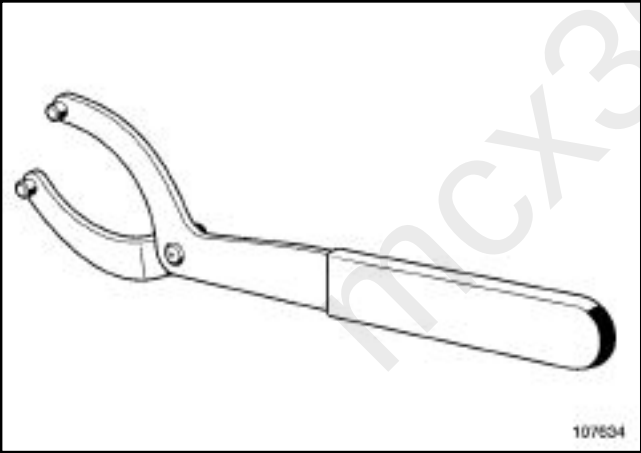
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Illustration	Tool number	Tool part number	Description
 101777	Mot. 1666	00 00 166 600	Balancing shaft timing tool.
 13284	Mot. 1677	00 00 167 700	Flywheel locking tool.
	Mot. 1714	77 11 381 714	Adapter for Mot. 1586 for cranks-hafts with M14 thread hole.

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

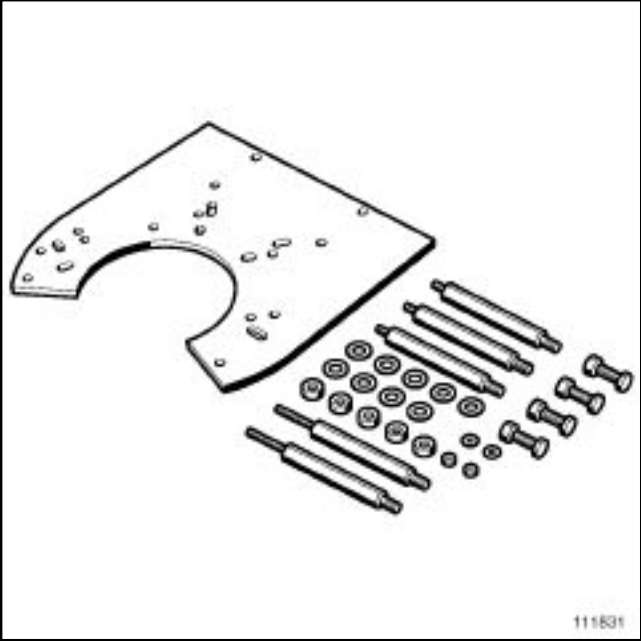
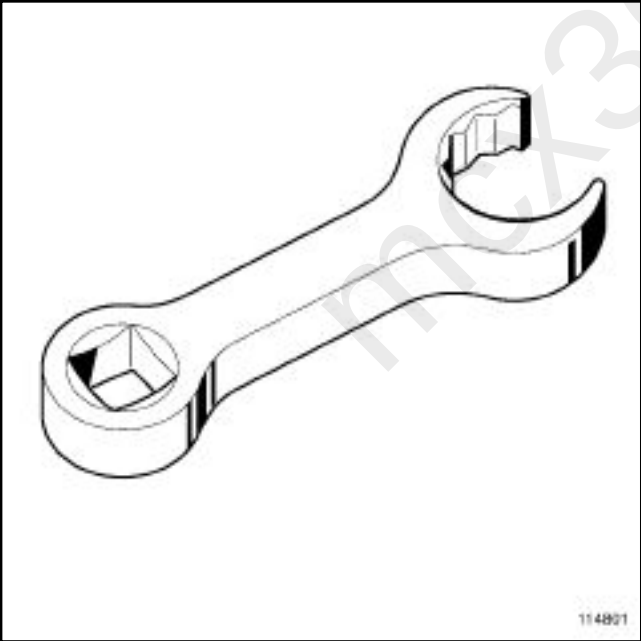
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Illustration	Tool number	Tool part number	Description
 106507	Mot. 1715	77 11 381 715	Frequency meter for belt tension.
 107634	Mot. 1729	77 11 381 729	EGR valve removal spanner.

ENGINE AND LOWER ENGINE ASSEMBLY

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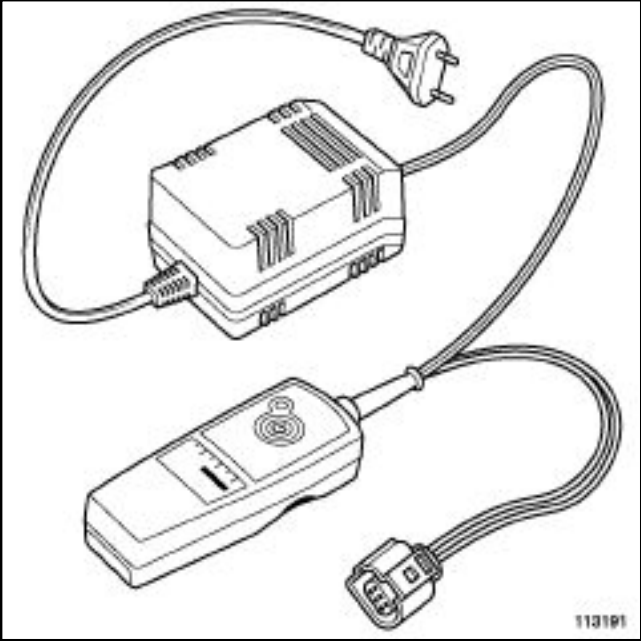
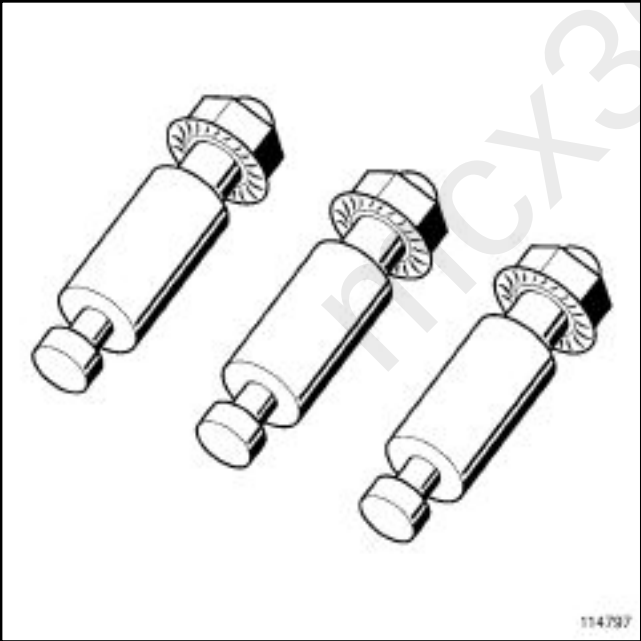
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Illustration	Tool number	Tool part number	Description
 111831	Mot. 1723	77 11 381 723	Engine stand.
 114801	Mot. 1746	77 11 381 746	Offset spanner for high pressure pipes

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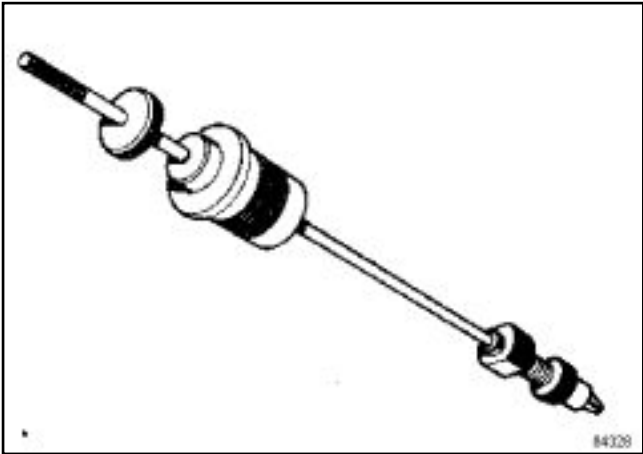
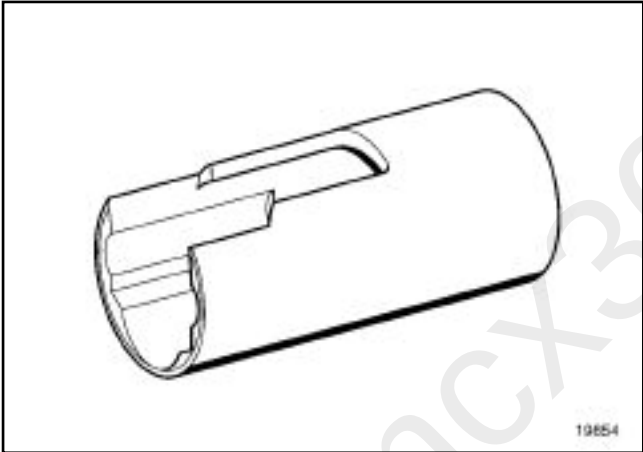
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Illustration	Tool number	Tool part number	Description
 113191	Mot. 1757	77 11 381 757	EGR valve cleaning tool.
 114797	Mot. 1768	77 11 381 768	High pressure pump sprocket extractor claws.

ENGINE AND LOWER ENGINE ASSEMBLY

Special tooling

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Illustration	Tool number	Tool part number	Description
 84328	Emb. 880	00 00 088 000	Pin extractor.
 19854	Emb. 1596	00 00 159 600	24mm socket.