

# Volvo Special Tools 1975

240,264

# VOLVO

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## FOREWORD

This catalogue contains a **general list** of all special tools for the 240 and 260-series and a picture which gives a more detailed description of the appearance and function of the ninety or so new tools for the 240 and 264 models.

In the general list, tools are arranged in numerical sequence. If, therefore, a tool number is known, then it is possible to find out quickly the following information:

1. **Tool designation and the vehicles, engine types, etc., for which the tool can be used.**

2. **Tool group number**

Each tool has been given a two-digit group number for easy identification of a certain special tool.

The group number corresponds to the Group Division which applies to the MAF-Code and the Volvo Work Operations. The first two digits in the operation number for the Volvo Standard Times also correspond to the group number marked on the tool. With the help of the group number, the tool can also be linked with the section and part of the car where it is used.

The group number will have a rectangular frame so as not to confuse it with the tool number.

3. **Tool classes:**

The tools are divided into four classes.

**Class 1 (Necessary tools)**

This class contains all those tools which, from the viewpoint of reliability and quality, are necessary for a particular repair.

**Class 2 (Recommended tools)**

This class contains tools which can simplify a repair and make it much easier, e.g., fixtures, stands and lifting devices.

**Class 3 (Expensive tools)**

This class contains tools which cost more than Sw.Crs. 500:– each. They are not included in the subscription but must be ordered separately.

**Class 4 (Body tools)**

This class contains tools for work on bodies.

4. **Tools which should be available in the various types of workshops.**

Volvo workshops are divided into three different groups.

**Group A**

This group includes those workshops which do all types of repairs and therefore require all the tools.

**Group B**

This group includes those workshops which do all kinds of repairs except complete re-conditioning of

- Engines
- Automatic transmissions
- Rear axle
- Power steering

### **Group C**

This group includes small workshops (Service workshops) which are engaged in

- Maintenance service
- Testing and fault tracing
- Replacing complete units
- Replacing all outer seals
- General repair work

The picture section shows sectionwise how the new tools are used. The text belonging to each picture generally contains all the information required for the correct use of a tool. If this is not the case, the text will refer to a particular Service Manual containing the required information.

Each section starts with a picture showing how all the tools can be suitably hung up.

## LIST OF TOOLS FOR 240-SERIES AND 264

\*new tools

999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
1426	Drift for fitting crankshaft pilot bearing (B20)	21	X		A,B,C	1	
1797	Drift for removing rear bearing (M41)	43	X		A,B	1	
1801	Standard handle 18x200 for drifts	10	X	X	A,B,C	1	
1819	Puller for steering shaft bushing (power steering)	64	X	X	A	1	
1845	Press tool for fitting drive flange M41 and final drive types 1030, 1031	43,46	X	X	A,B,C	1	
2250	Puller for camshaft gear (B20)	21	X		A,B,C	1	
2261	Puller for drive flange, gearbox types M40, M41, M50, M51 and final drive types 1030, 1031	43,46	X	X	A,B,C	1	
2263	Puller for removing steering wheel	64	X	X	A,B,C	1	alt. 999 5003
2284	Dial gauge holder for adjusting pinion, (final drive types 1030, 1031)	46	X	X	A	1	
2304	Press tool for fitting drive flange (M40)	43	X		A,B,C	1	
2337	Drift for removing oil sealing ring (M50, M51)	10		X	A	2	
2392	Puller for rear pinion bearing (final drive types 1030, 1031)	46	X	X	A	1	
2393	Tool for measuring pinion adjustment, (final drive types 1030, 1031)	46	X	X	A	1	
2394	Expanding tool for removing and fitting a limit slip differential (final drive types 1030, 1031)	46	X	X	A	1	
2395	Sleeve for installing inner ring pinion bearing (final drive)	46	X		A	1	
2404	Spanner for fitting front pinion bearing (final drive types 1030, 1031)	46	X	X	A	1	
2405	Puller for crankshaft gear (B20)	21	X		A,B,C	1	
2408	Press tool for fitting crankshaft gear (B20)	21	X		A,B,C	1	
2412	Drift for assembling transmission (M40, M41, M50, M51)	43	X	X	A,B	1	
2413	Drift for fitting oil seal in rear cover (M40)	43	X		A,B,C	1	
2417	Drift for removing gear selector seal (M50, M51)	43		X	A	2	
2424	Grip tool for valve tappets (B20)	21	X		A,B,C	1	

\* new tools

999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
2427	Universal joint for spanner 999 2487 (M40, M41)	43	X		A,B,C	1	
2435	Dowels for fitting cylinder block (B20)	21	X		A,B,C	1	
2438	Centering sleeve for timing gear casing (B20)	21	X		A,B,C	1	
2440	Puller for crankshaft hub (B20)	21	X		A,B,C	1	
2483	Puller for differential carrier bearing (final drive types 1030, 1031)	46	X	X	A	1	
2484	Drift for centering clutch disc	41	X		A,B,C	1	
2487	Hexagon spanner 3/8" for upper gearbox bolts (M40, M41)	43	X		A,B,C	1	
2520	Stand for re-building assemblies	10	X	X	A	2	
2521	Fixture for engine overhaul (B20)	21	X		A	2	incl. 999 2520
2522	Fixture for rear axle when working on final drive	46	X	X	A	2	incl. 999 2520
2530	Fixture for disassembling, assembling automatic transmission (BW35)	44	X		A	1	
2531	Pressure gauge with hose, for checking oil pressure (BW35, BW55)	44	X	X	A,B,C	1	For BW55 incl. 999 5074
2532	Attaching plate for measuring end float (BW35)	44	X		A	1	
2533	Press tool for removing, fitting clutch (BW35)	44	X		A	1	
2537	Packing block for adjusting front band (BW35)	44	X		A,B	1	
2595	Adjusting rings for differential carrier bearing (final drive types 1030, 1031)	46	X	X	A	1	
2597	Brake for crown wheel when checking tooth contact (final drive types 1030, 1031)	46	X	X	A	1	
2598	Drift for removing outer ring, rear pinion bearing (final drive type 1030)	46	X		A	1	
2599	Drift for removing outer ring, front pinion bearing (final drive types 1030, 1031)	46	X	X	A	1	
2600	Fixture for measuring adjusting rings (final drive types 1030, 1031)	46	X	X	A	1	
2601	Holder, 2, for 999 2394 (final drive types 1030, 1031)	46	X	X	A	1	
2685	Adjusting ring for pinion (final drive type 1030)	46	X		A	1	
2686	Press tool for fitting outer rings (final drive type 1030)	46	X		A	1	
2706	Drift for removing and fitting Panhard rod bushing	76	X	X	A,B	1	

999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
2709	Extractor for drive shaft	46	X	X	A,B,C	1	
2714	Jack fixture for raising, lowering vehicle	46	X	X	A	2	
2722	Puller for inner front bearing	77	X	X	A,B,C	1	
2724	Drift for removing, fitting bearing rings, wheel hub	77	X	X	A,B	1	
2725	Drift for removing bearing rings, wheel hub	77	X	X	A,B,C	1	
2726	Puller for front wheel hub	77	X	X	A,B,C	1	
2731	Drift for replacing tie rod bushing	76	X	X	A,B	1	
2733	Sleeve for counterhold, bushing tie rod replacement	76	X	X	A,B	1	
2734	Drift for fitting cover seal (manual steering)	64	X	X	A,B,C	1	
2743	Dowels for installing gearboxes (M40, M41)	43	X		A	2	
2748	Torque wrench for adjusting front band (BW35)	44	X		A,B	1	
2779	Spanner N=11.1 for drive flange bolts (Propeller shaft type 1140)	45	X		A,B,C	1	
2806	Drift for oil seal on dry flange	46	X	X	A,B,C	1	
2809	Press tool for piston in brake caliper	50	X	X	A,B,C	1	
2810	Lifting beam for removing and installing engine (B20, B21, B27)	21	X	X	A,B	1	
2817	Drift for fitting oil seal on crankshaft (B20, B21)	21	X		A,B	1	
2818	Drift for removing valve guides (B20, B21)	21	X		A,B,C	1	
2819	Drift for fitting valve guides (B20)	21	X		A,B,C	1	
2823	Ring for fitting piston (B20) (Std. dim )	21	X		A	2	
2827	Puller for front bearing, intermediate shaft (M50, M51)	43		X	A,B	1	
2834	Pressure gauge for checking oil pressure (M41)	43	X		A,B	1	
2835	Drift for centering, transmission assembly (M41)	43	X		A,B	1	
2836	Spanner for plugs (M41)	43	X		A,B	1	
2837	Counterhold for flange M40, M41, BW35 for B20E, B21 with propeller shaft 1310	43,44 45,46	X	X	A,B,C	1	

\* new tools

999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
2838	Press tool, removing and fitting drive shaft seal	46	X	X	A,B,C	1	
2840	Ring for adjusting pinion (final drive type 1031)	46		X	A	1	
2841	Box spanner for adjusting pinion ring (final drive types 1030, 1031)	46	X	X	A	1	
2842	Sleeve for fitting rear pinion bearing (final drive type 1031)	46		X	A	1	
2843	Drift for removing rear pinion bearing outer ring (final drive type 1031)	46		X	A	1	
2844	Puller, rear pinion bearing (final drive type 1031)	46		X	A	1	
2845	Press tool, pinion bearing outer rings (final drive type 1031)	46		X	A	1	
2846	Hex spanner N=14.4 mm for drive flange bolts (propeller shaft type 1310)	45	X	X	A,B,C	1	
2854	Counterhold for flange for M40, M41, BW35, for B20A, B20F with prop. shaft 1140	43,44 45,46	X		A,B,C	1	
2862	Press tool, removing and fitting wheel bolts.	77	X	X	A,B,C	1	
2865	Connection nipple for 999 5055 (Power steering)	64	X	X	A,B	1	
2867	Drift for fitting primary shaft seal (M40, M41)	43	X		A,B	1	
2869	Attachment for lifting beam, engine replacement (B20)	21	X		A,B	1	
2870	Attachment for lifting beam, rear engine replacement (B20)	21	X		A,B	1	
2878	Extractor for reverse shaft (M40, M41)	43	X		A,B	1	
2895	Press tool for adjusting carburettor (B20)	23	X		A,B,C	1	
2896	Gauge, adjusting carburettor (B20)	23	X		A,B,C	1	
2897	Press tool, adjusting carburettor (B20)	23	X		A,B,C	1	
2898	Spanner, final-tightening cylinder head bolts (B20)	21	X		A,B,C	1	
2899	Fixture, fitting windscreen	80	X	X	A,B	1	
2900	Ring, fitting piston, front clutch (BW35)	44	X		A	1	incl. 999 2993
2903	Spanner, removing oil filter (B20, B21)	21	X		A,B,C	1	
2907	Drift, fitting intermediate drive (M40)	43	X		A,B	1	
2908	Drifts, 2, idler gear thrust washer (M40, M41)	43	X		A,B	1	



\*new tools

999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
2917	Extractor, brake pads	50	X	X	A,B,C	1	
2922	Fixture, reconditioning gearboxes (M40)	43	X		A	2	incl. 999 2520
2934	Fixture, reconditioning transmission (BW35)	44	X		A	2	
2962	Press tool, carburettor jet (B20)	23	X		A,B,C	1	
2971	Bleeder spanner, brakes	50	X	X	A,B,C	1	
2975	Spanner, start inhibitor contact (BW35)	44	X		A,B,C	1	
2990	Connection nipple for 999 5055 (power steering)	64	X	X	A,B	1	
2993	Guide, fitting front clutch piston (BW35)	44	X		A	1	incl. 999 2900
4028	Drift, fitting seal and bearing, water pump	26		X	A,B	1	
4078	Extractor teflon bushing	64	X	X	A,B	2	Mechanical
4080	Drift, fitting bearing and rear cover (M40)	43	X		A,B	1	
4090	Puller, crankshaft pilot bearing (B20, B21, B27)	21 41	X	X	A,B,C	1	
4112	Drift, fitting differential carrier bearing (final drive types 1030, 1031)	46	X	X	A	1	
5000	Ring, fitting rear clutch piston (BW35)	44	X		A	1	
5003	Puller, steering wheel	64	X	X	A,B,C	1	
5005	Drift, fitting bearing ring in sealing washer	77	X	X	A,B,C	1	
5006	Lift bar, engine front (B20, B21, B27)	21	X	X	A	2	Incl. 2 999 5033
5009	Drift, fitting drive shaft inner seal	46	X	X	A,B,C	1	
5010	Ring, replacing drive shaft bearing and seal	46	X	X	A,B,C	1	
5011	Pressure gauge, checking line and control pressure (B20, B21, B27)	24	X	X	A,B,C	1	
5012	Pliers for fitting 5 and 8 mm (3/16" and 5/16") fuel lines (B20, B21, B27)	24	X	X	A,B,C	1	
5013	Pliers, installing 10 mm (3/8") fuel lines (B20)	24	X		A,B,C	1	
5014	Fuel gauge, checking injection (B20, B21, B27)	24	X	X	A,B	1	
5015	Setscrew wrench, CO adjustment (B20, B21)	24	X		A,B,C	1	

\* new tools

999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
5016	Spanner for fuel tank gauge	30	X	X	A,B,C	1	
5017	Drift for replacing connecting rod bushing (B20, B21)	21	X		A,B	1	
5018	Press tool for overhauling universal joints (propeller shaft types 1140, 1310)	45	X	X	A,B	3	
5019	Puller for overhauling universal joints (propeller shaft types 1140, 1310)	45	X	X	A,B	3	
5021*	Press tool, for removing, installing camshaft (B21)	21	X		A,B	1	
5022*	Press tool, valve adjustment (B21)	21	X		A,B,C	1	
5023*	Fixture, engine overhaul (B21)	21	X		A,B	2	incl. 999 2520
5024*	Attachment tool, crankshaft front seal (B21)	21	X		A,B,C	1	
5025*	Attachment tool, intermediate shaft seal (B21)	21	X		A,B,C	1	
5026*	Pliers, valve adjustment (B21)	21	X		A,B,C	1	
5027*	Drift, fitting intake valve guide (B21)	21	X		A,B	1	
5028*	Drift, fitting exhaust valve guide (B21)	21	X		A,B	1	
5031*	Ring, fitting piston (B21)	21	X		A,B	2	Std. dim.
5032*	Nipple, pressure gauge connection (B21, B27)	24	X	X	A,B,C	1	incl. 999 5011
5033*	Support, lift bar 999 5006	21	X	X	A,B	2	2 used
5034*	Counterhold, crankshaft intermediate shaft and camshaft	21	X		A,B	1	
5035*	Retainer, hoist bar, engine replacement (B21)	21	X		A,B	2	incl. 999 2810
5036*	Spanner, shock absorber replacement	73	X	X	A,B,C	1	
5037*	Retaining tool, shock absorber replacement	73	X	X	A,B,C	1	
5038*	Adjustment tool, front end alignment	73	X	X	A,B,C	1	
5039*	Hook spanner, shock absorber replacement	73	X	X	A,B,C	1	
5040*	Compressing tool, shock absorber coil spring replacement	73	X	X	A,B,C	1	2 together
5041*	Press tool, spring replacement	73	X	X	A,B	1	
5042*	Spanner, rear band adjustment (BW35)	44	X		A,B,C	1	

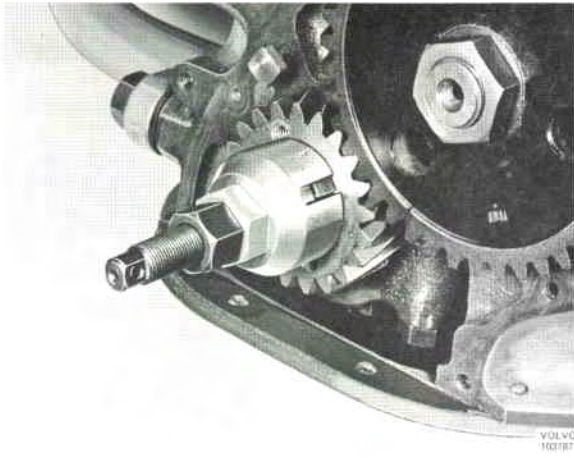
999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
5043*	Puller, steering rod	73	X	X	A,B		
5045*	Retaining hook, shock absorber replacement	73	X	X	A,B,C	1	
5046*	Fixture, steering gear overhaul (manual and power-assisted)	64	X	X	A	2	incl. 999 2520
5047*	Puller for bearing, steering gear overhaul (manual)	64	X	X	A	2	
5048*	Drift for fitting bearing, steering gear overhaul (manual)	64	X	X	A	2	
5049*	Sleeve for adjusting power-assist balance, steering gear	64	X	X	A	1	
5050*	Drift, for fitting seal, bearing, steering gear overhaul (power-assisted)	64	X	X	A	1	
5051*	Puller for bearing and seal, steering gear overhaul	64	X	X	A	1	incl. 999 5047
5052*	Drift for fitting bearing, steering gear overhaul (power-assisted)	64	X	X	A	1	
5053*	Sleeve, checking steering gear (manual)	64	X	X	A,B	1	
5054*	Cover for adjusting power-assist balance (power-assisted steering)	64	X	X	A,B	1	
5055*	Instrument for testing power-assist balance, oil pressure (power-assisted steering)	64	X	X	A,B	1	
5056*	Sleeve for fitting seal, steering gear overhaul (power-assisted)	64	X	X	A	1	
5057*	Fixture, transmission overhaul (M50, M51)	43		X	A	2	incl. 999 2520
5058*	Puller, transmission disassembly (M50, M51)	43		X	A,B	1	incl. 999 5059
5059*	Extension for puller 999 5058, transmission disassembly (M50, M51)	43		X	A,B	1	
5060*	Sleeve, transmission assembly (M51)	43		X	A,B	1	
5061*	Press, tool, transmission assembly (M51)	43		X	A,B	1	
5062*	Counterhold for flange (M50, M51, propeller shaft type 1310)	43 46		X	A,B,C	1	
5063*	Puller, transmission disassembly (M51)	43		X	A,B	1	
5064*	Drift, fitting flange seal (M50, M51)	43		X	A,B,C	1	
5065*	Drift, fitting gear selector shaft seal (M50, M51)	43		X	A,B	1	
5066*	Dowels (2), for transmission assembly (M50, M51)	43		X	A,B	1	
5067*	Drift, transmission assembly M50, M51)	43		X	A,B	1	

\* new tools

999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
5069*	Puller for sealing ring, M50, M51, BW35, BW55, 1030 and 1031	43,44 46	X	X	A,B,C	1	
5070*	Fixture, transmission overhaul (BW55)	44		X	A	2	incl. 999 2520
5071*	Puller for pump body (BW55)	44		X	A	1	
5072*	Press tool, disassembling and assembling clutch assembly (BW55)	44		X	A	1	
5073*	Press tool for disassembling and assembling pistons for brake B3 (BW55)	44		X	A	1	
5074*	Connection nipple, oil pressure check (BW55)	44		X	A,B,C	1	incl. 999 2531
5075*	Drift for fitting flange seal (BW55)	44		X	A,B,C	1	
5076*	Retainer for replacing oil pan in vehicle (BW55)	44		X	A	1	
5077*	Tensioning band, oil pump (BW55)	44		X	A	1	
5078*	Press tool, control arm bushing replacement	76	X	X	A,B	1	incl. 999 5079
5079*	Spacer, control arm bushing replacement	76	X	X	A,B	1	incl. 999 5078
5080*	Drift for fitting flange lock washer (M50, M51)	43		X	A,B,C	1	
5081*	Sleeve for replacing control arm rear bushing	62	X	X	A,B	1	
5082*	Sleeve for replacing control arm rear bushing	62	X	X	A,B	1	
5083*	Drift for replacing control arm rear bushing	62	X	X	A,B	1	
5084*	Drift for replacing control arm front bushing	62	X	X	A,B	1	
5085*	Sleeve for replacing control arm front bushing	62	X	X	A,B	1	
5086*	Drift for replacing reaction rod bushing	76	X	X	A,B	1	
5087*	Sleeve for replacing trailing arm/reaction rod bushing	76	X		A,B	1	
5088*	Drift for replacing reaction rod bushing	76	X	X	A,B	1	
5089*	Press tool for fitting crankshaft gear (M-thread B20)	21	X		A,B,C	1	
5090*	Sleeve for fitting mainshaft (M51)	43		X	A,B	1	
5091*	Drift for removing control arm front bushing	62	X	X	A,B	1	
5092*	Combined tool, gudgeon pin replacement (B27)	21		X	A	1	

\* new tools

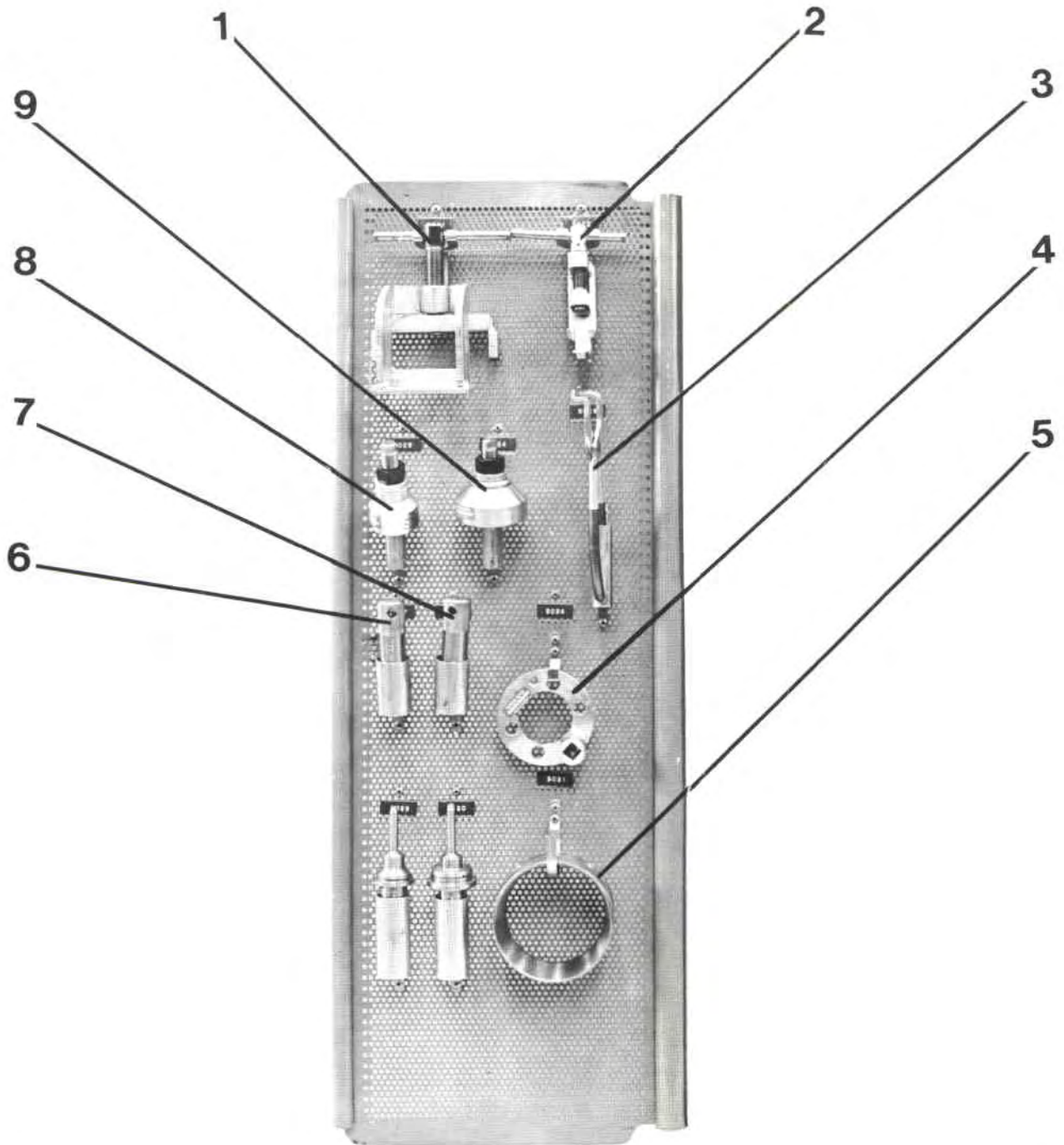
999	DESCRIPTION USE	Group No	240	264	In Group	Tool Class	Remarks
5093*	Plate with screw for retaining cylinder liner (B27)	21		X	A	1	4 used
5094*	Retainer for dial indicator when checking cylinder liner height (B27)	21		X	A	1	
5096*	Retainer for retaining main bearing and crankshaft (B27)	21		X	A	1	4 used
5098*	Protractor wrench for torquing cylinder head bolts (B27)	21		X	A,B,C	1	
5099*	Fixture for engine overhaul (B27)	21		X	A	1	
5100*	Retainer for 999 2810 when replacing engine (B27)	21		X	A,B	1	2 used
5101*	Drift for fitting crankshaft support bearing (B27)	21 41		X	A,B	1	
5102*	Hexagon spanner for adjusting CO-value (B27)	24		X	A,B,C	1	
5103*	Drift for fitting crankshaft front seal (B27)	21		X	A,B	1	
5104*	Retainer for camshaft chain gear, when removing cylinder head (B27)	21		X	A,B	1	
5105*	Bracket for supporting chain gear when cylinder head is removed (B27)	21		X	A	2	
5106*	Ring for fitting piston (B27)	21		X	A	2	
5107*	Drift for fitting crankshaft rear seal (B27)	21		X	A	1	
5108*	Drift for fitting intake valve guide (B27)	21		X	A,B	1	
5109*	Drift for fitting exhaust valve guide (B27)	21		X	A,B	1	
5112*	Gear sector for blocking flywheel (B27)	21		X	A,B	1	
5113*	Centering drift for clutch	41		X	A,B,C	1	
5114*	Pressure gauge, 0–10 kp/cm <sup>2</sup> (0–135 lbf/in <sup>2</sup> ) for checking oil pressure (BW55)	44		X	A,B,C	1	
5115*	Hook for lifting eyelet 999 5006 (B21, B27)	21	X	X	A	2	
5116*	Hose for connecting 999 5011 (B21, B27)	24	X	X	A,B,C	1	
5117*	Drift for fitting input shaft sealing ring (BW35, BW55)	44	X	X	A	1	
5118*	Drift for fitting control shaft sealing ring (BW55)	44		X	A	1	
5119*	Key for lock nut upper bearing pinion, ZF steering gear	64	X		A,B	1	
5120*	Attachment for hoist bar 999 5006, engine front (B27)	21		X	A	2	



## NEW TOOLS FOR B20

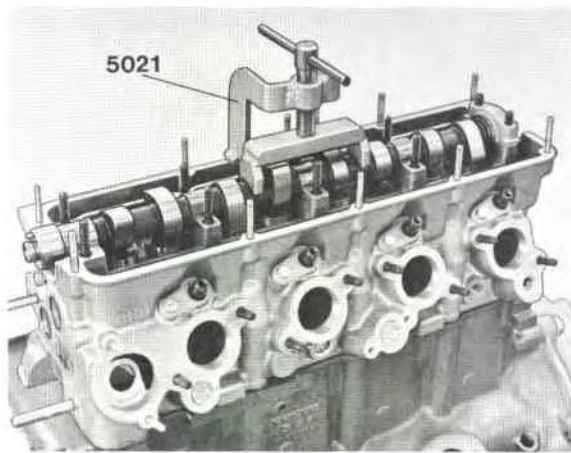
**5089\*** Press tool for fitting crankshaft gear  
(M-thread)

## NEW TOOLS FOR B21



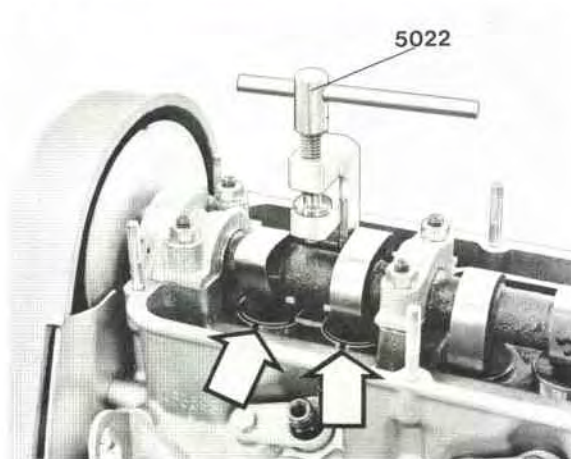
1	5021*	Press tool for removing, installing camshaft	6	5027*	Drift, for fitting intake valve guide
2	5022*	Press tool, valve adjustment	7	5028*	Drift, for fitting exhaust valve guide
3	5026*	Pliers, valve adjustment	8	5025*	Attachment tool, for intermediate shaft seal
4	5034*	Counterhold, crankshaft intermediate shaft and camshaft	9	5024*	Attachment tool, for crankshaft front seal
5	5031*	Ring, for fitting piston			

\* New tools



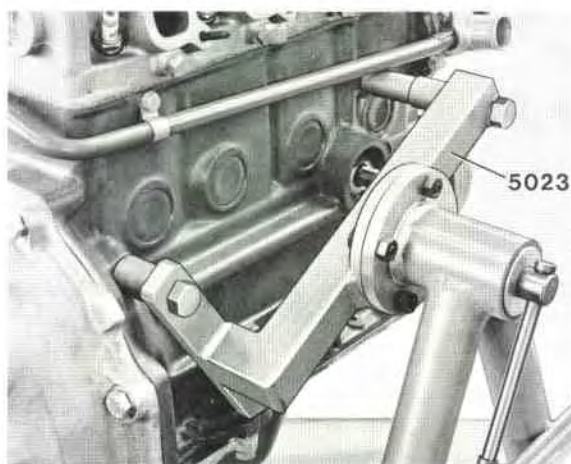
**5021\* Press tool for pressing down camshaft when removing and installing.**

Place tool as shown in picture over centre cap. The tool will hold camshaft in position while you remove or fit the other caps.



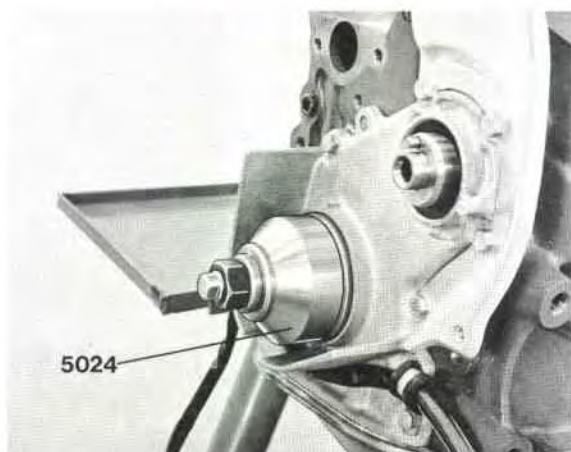
**5022\* Press tool for pressing down valve suppressors when replacing valve adjuster washer.**

Place tool as shown in picture. Screw down tool spindle so far that the suppressor groove comes over the edge and can be grasped with pliers 5026.



**5023\* Fixture for engine overhaul (incl. 999 2520)**

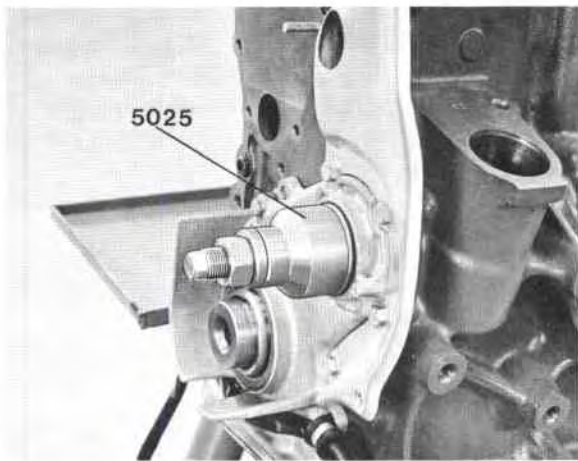
Place engine on stand 2520 with fixture 5023 as shown in picture.



**5024\* Attachment tool for crankshaft front seal.**

Screw tight tool spindle to crankshaft thread. Press seal into position by screwing tool nut to stop. Oil sealing lip before fitting seal.





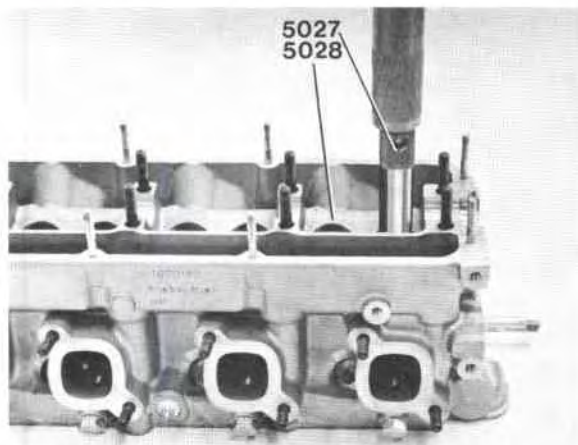
**5025\*** Attachment tool for intermediate shaft seal.

See text for tool 5024.



**5026\*** Pliers for lifting up washer when adjusting valves.

Use as shown in picture.



**5027\*** Drift for fitting intake valve guide

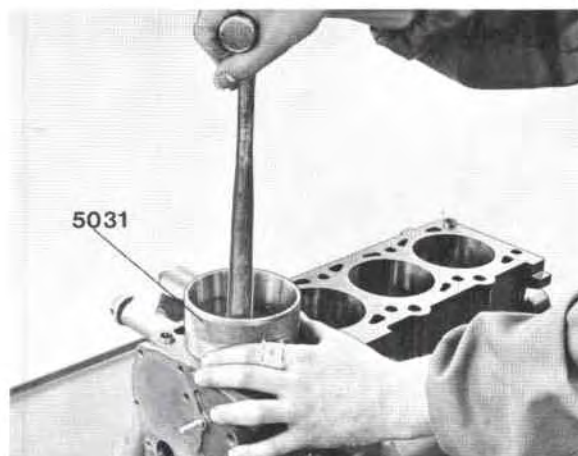
**5028\*** Drift for fitting exhaust valve guide

Use drift 5027 for intake valve and drift 5028 for exhaust valve.

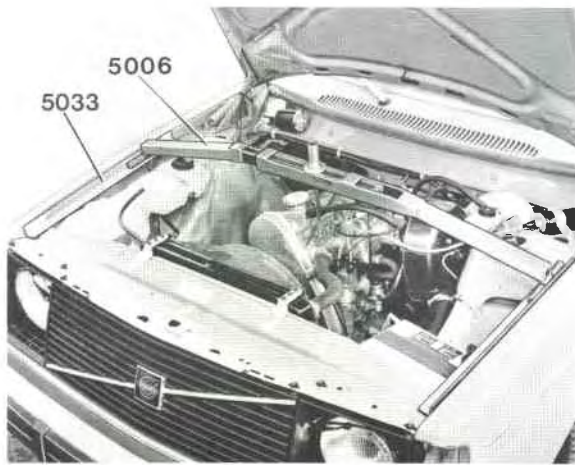
Press down guide until tool goes against cylinder head. This will give guide a height above cylinder head face as follows:

Intake:  $15.5 \pm 0.1$  mm ( $0.610 \pm 0.0039$ " )

Exhaust:  $18.0 \pm 0.1$  mm ( $0.710 \pm 0.0039$ " )



**5031\*** Ring for fitting piston in cylinder liner (standard size)

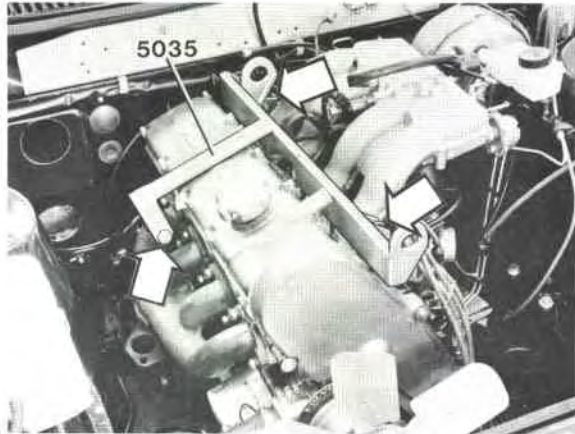


**5033\*** Support for lift bar 999 5006 when replacing engine mount or oil pan gasket (two are used simultaneously)

Use tool 5033 together with tools 5006 and 5115 as shown in picture.



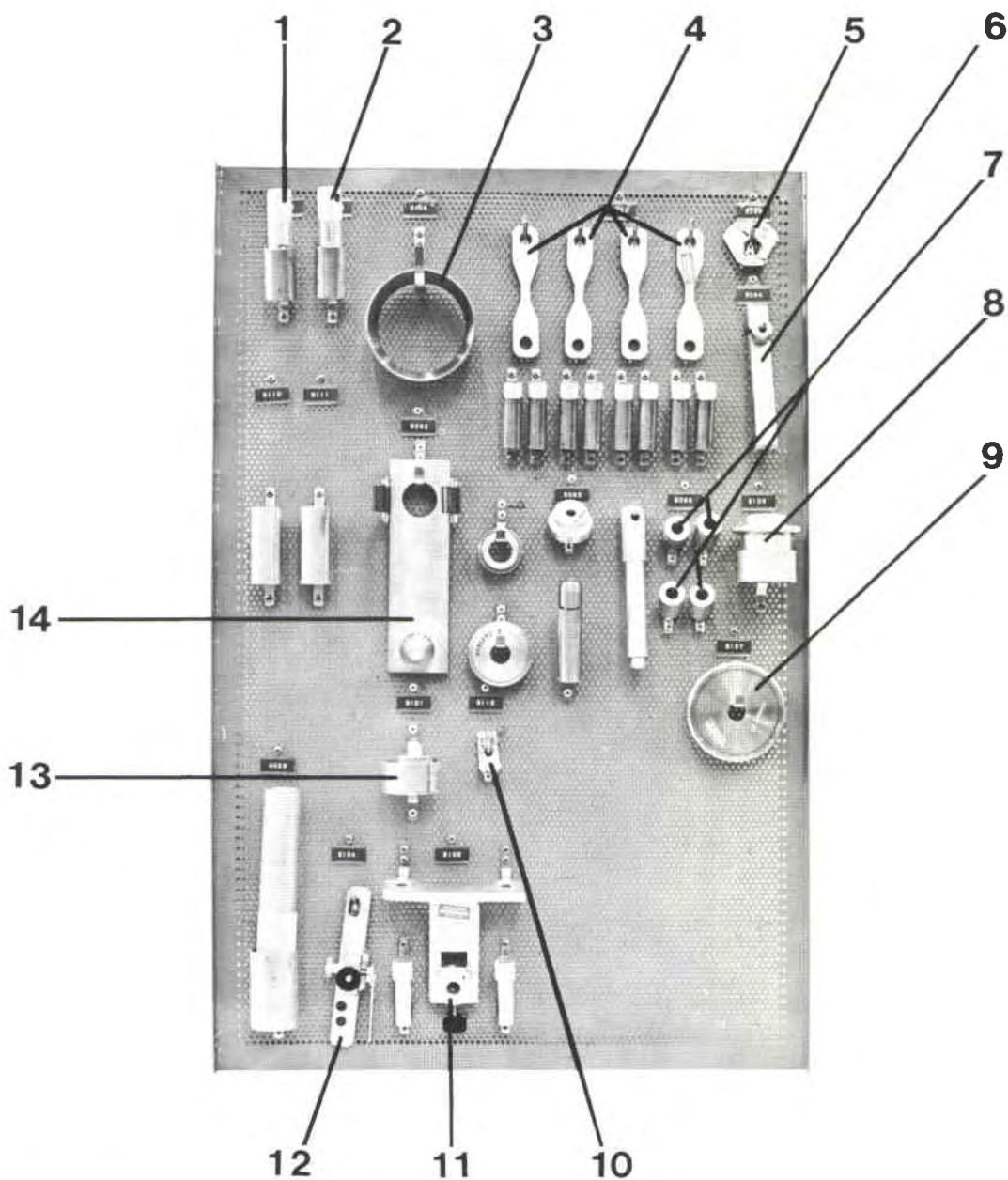
**5034\*** Counterhold for crankshaft, intermediate shaft and camshaft



**5035\*** Retainer for hoist bar 999 2810 when removing and installing engine

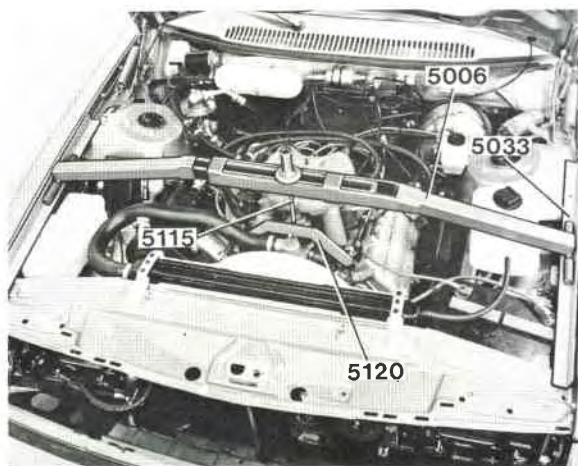
Fit retainer 5035 to engine's three lift eyelets.

### NEW TOOLS FOR B27



1	5108*	Drift for fitting intake valve guide	8	5103*	Drift for fitting crankshaft front seal
2	5109*	Drift for fitting exhaust valve guide	9	5107*	Drift for fitting crankshaft rear seal
3	5106*	Ring for fitting piston	10	5112*	Gear sector for blocking flywheel
4	5093*	Plate with screw for retaining cylinder liner	11	5105*	Bracket for supporting chain gear when cylinder head is removed
5	5098*	Protractor wrench for torquing cylinder head bolts	12	5104*	Retainer for chain gear (timing), when removing cylinder head
6	5094*	Retainer for dial indicator when checking cylinder liner height	13	5101*	Drift for fitting crankshaft support bearing
7	5096*	Spacer for retaining main bearing	14	5092*	Combined tool for gudgeon pin replacement

\* new tools



**5033\* Support for lift bar 999 5006 (two used simultaneously)**

For engine mount replacement, lift front end of engine with lift bar 5006.

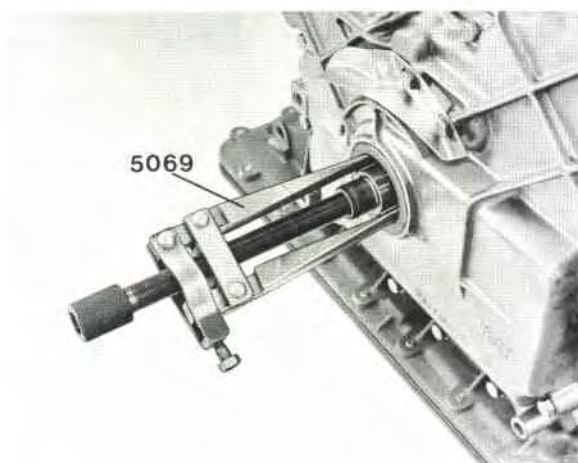
Support 5033, attachment 5120 and lift hook 5115 are used as shown in picture.

**5115\* Hook for lift bar 999 5006**

When using lift bar 5006 for B27, replace B20, B30 hook with hook 5115.

**5120\* Attachment for hoist bar 999 5006 on engine front end (Used together with 5006, 5115).**

Fit attachment 5120 to engine's two front lift eyelets. Fit lift bar 5006 with hook 5115 and support 5033.



**5069\* Puller for crankshaft front seal**

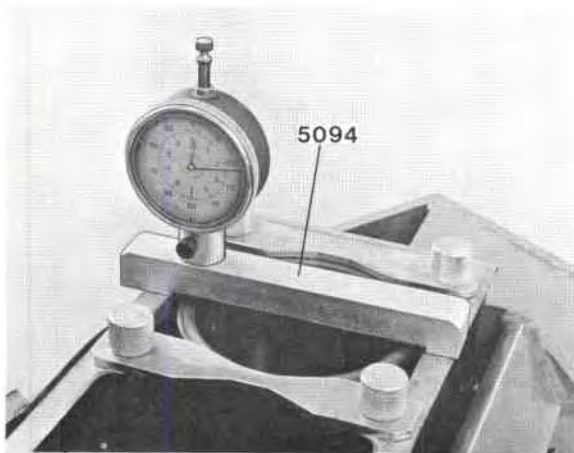


**5092\* Combined tool for removing and fitting gudgeon pin**



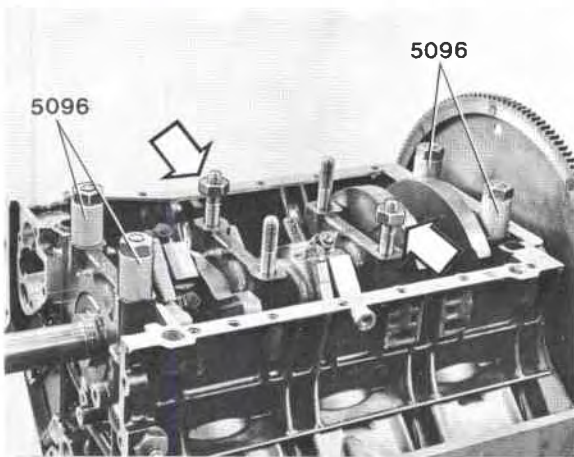
**5093\* Plate with screw for retaining cylinder liner (2 per cylinder bank)**

The liner retainer must be fitted as soon as the cylinder head has been removed since the sealing shims round the liners must not be off-loaded.



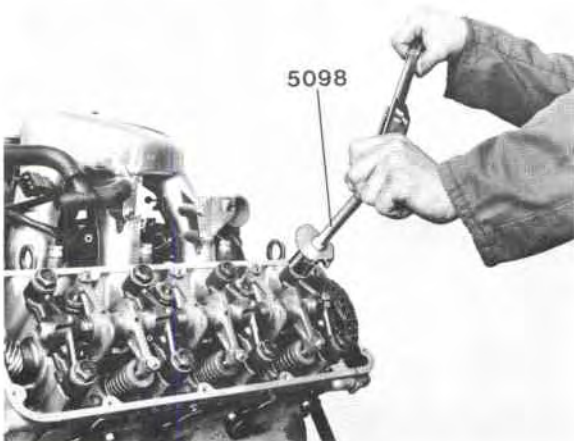
**5094\* Retainer for dial indicator when checking liner height above block face**

Place retainer with dial indicator on block. Measure liner height above block face. The liner should be 0.10–0.25 mm (0.0039–0.0098”) above the block face.



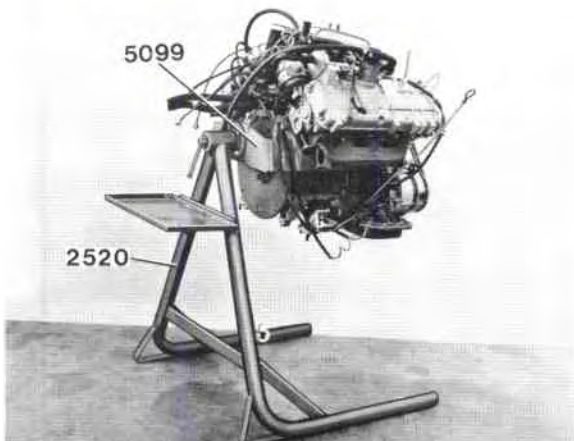
**5096\* Retainers for holding main bearings and crankshaft in position when lower crankcase is removed. Four are used.**

Fit as shown in picture.



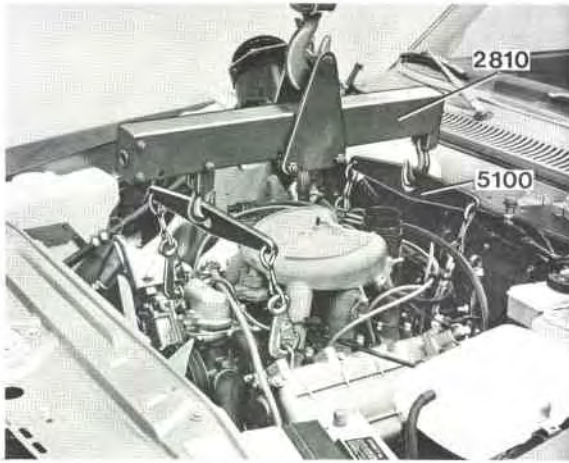
**5098\* Protractor wrench for torquing cylinder head bolts and main bearing nuts**

Fit protractor on standard socket. To get correct torque first tighten bolt/nut to indicated torque with torque wrench and then to indicated angle according to protractor.



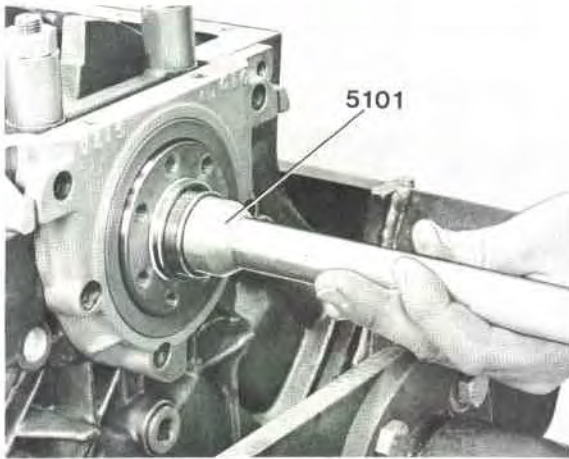
**5099\* Fixture for engine overhaul**

Fit fixture 5099 on engine. Place engine and fixture on stand 2520.



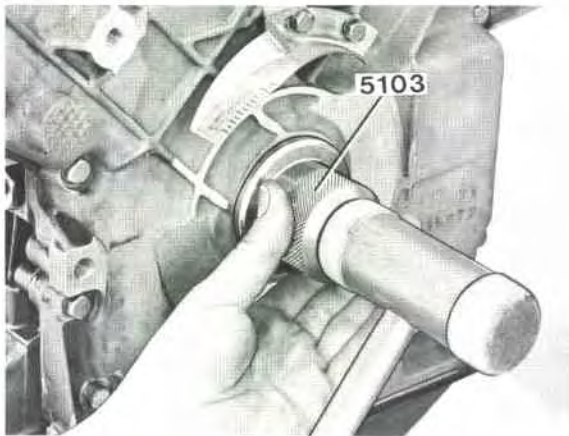
**5100\* Retainer for lift beam 999 2810 when removing and installing engine (two are used)**

Fit lift arms 5100 to engine's four lift eyelets. Hang lift beam 2810 from hoist and hook lift arms on lift beam.



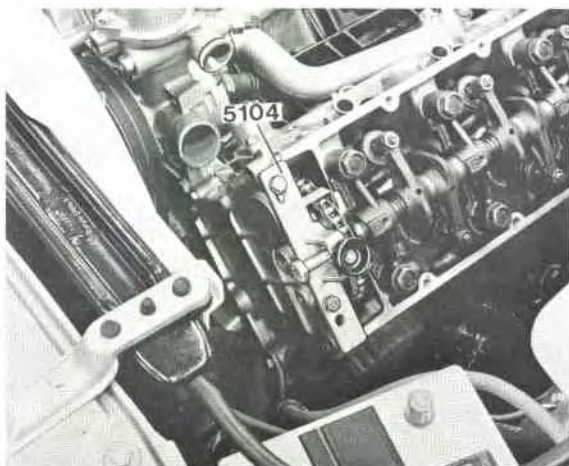
**5101\* Drift for fitting crankshaft support bearing**

Fit as shown in picture.



**5103\* Drift for fitting crankshaft front seal**

Fit as shown in picture.



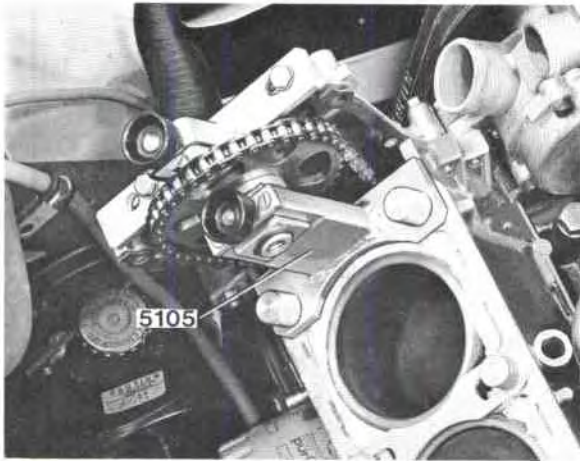
**5104\* Retainer for camshaft chain gear**

Use when removing cylinder heads with engine in vehicle.

The tool holds camshaft chain stretched after camshaft has been removed from camshaft gear.

Screw tight tool with two bolts to timing gear casing. Fit fixing screw in camshaft gear hole and tighten tool bolt by hand.

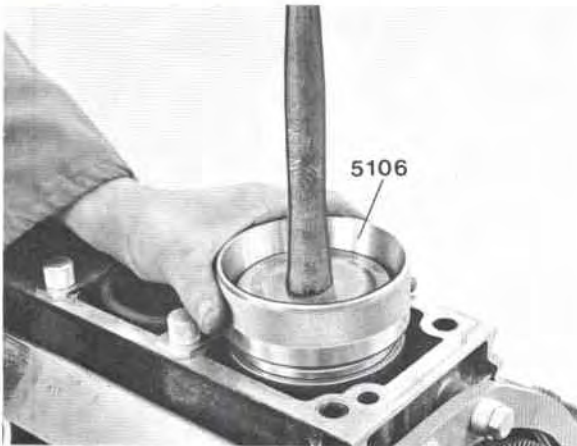
**NOTE!** The camshaft chain **must not** be allowed to slacken.



**5105\* Bracket for supporting camshaft chain gear (used together with 999 5104)**

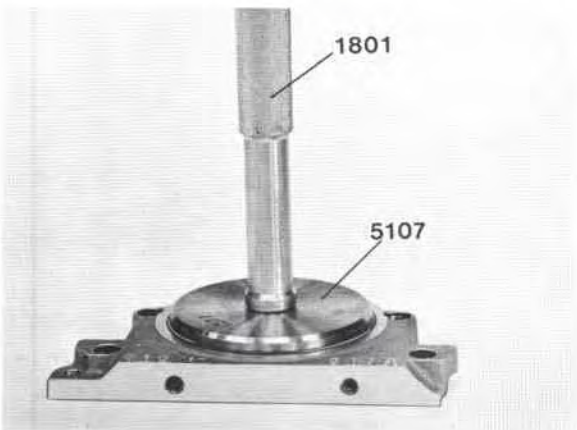
This tool makes it possible to rotate the crankshaft and camshaft chain gear when the cylinder head is removed. Fit 5105 together with 5104 (see previous page). Remove 5104 from camshaft gear.

**NOTE!** Do not slacken the camshaft chain.



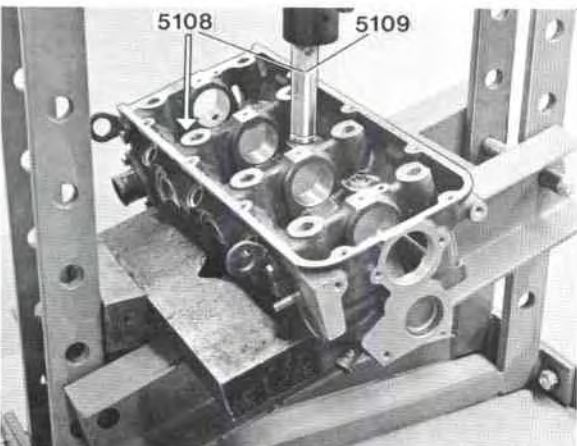
**5106\* Ring for fitting piston in cylinder liner**

Fit as shown in picture.



**5107\* Drift for fitting crankshaft rear seal**

Fit as shown in picture.



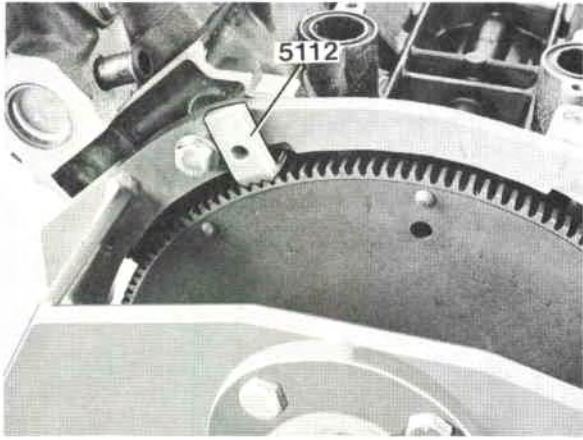
**5108\* Drift for fitting intake valve guide**

**5109\* Drift for fitting exhaust valve guide**

Press guide into cylinder head. These tools give respective guide a height above cylinder head face of:

Intake: 39.5–40.5 mm (1.555–1.594")

Exhaust: 36.9–37.9 mm (1.452–1.492")

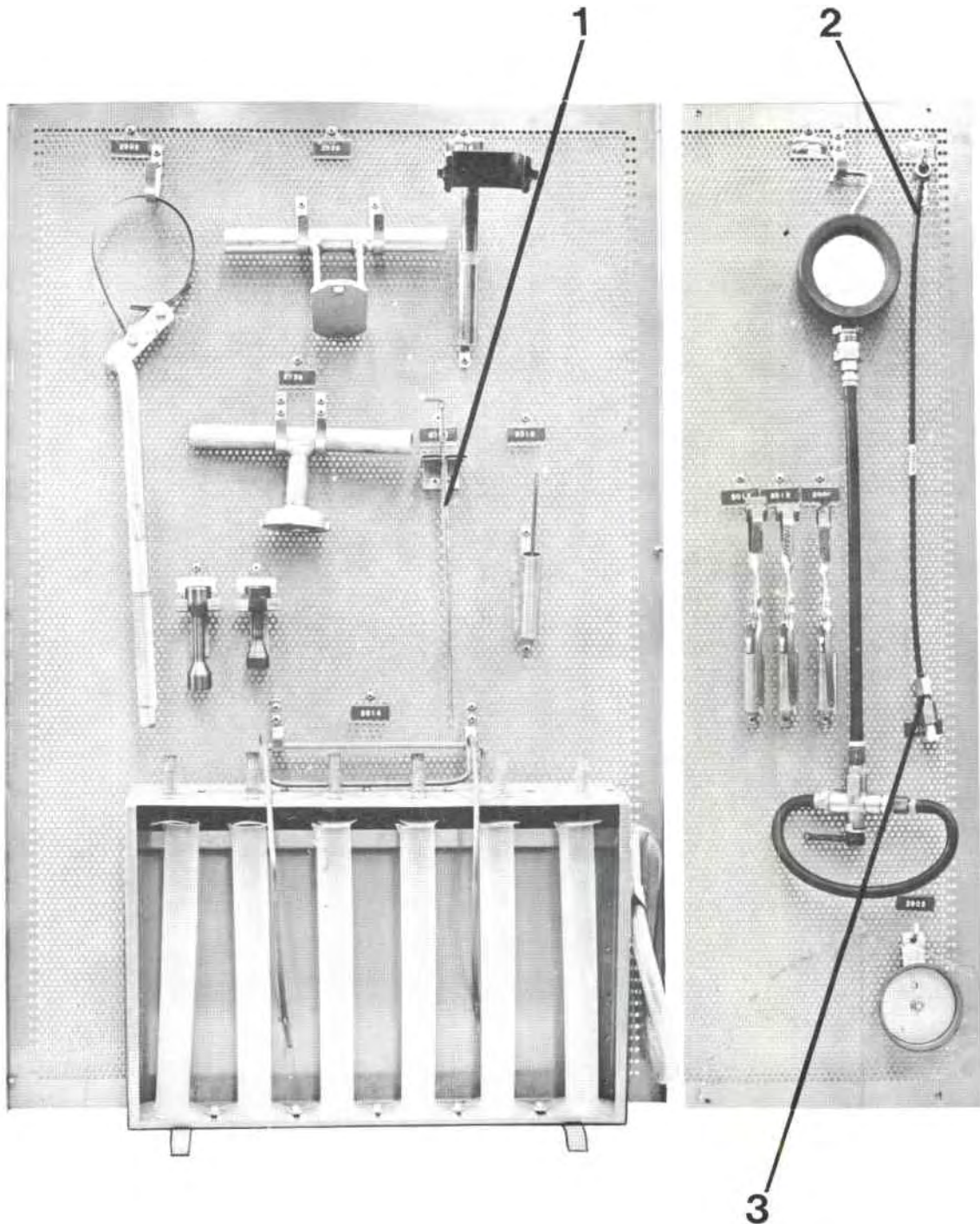


**5112\* Gear sector for blocking flywheel**

Fit gear sector in fixture 5099 and mesh with teeth on flywheel ring gear.

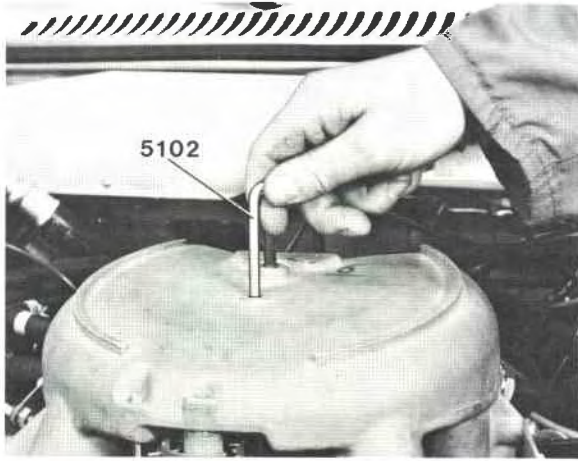


## NEW CI-TOOLS



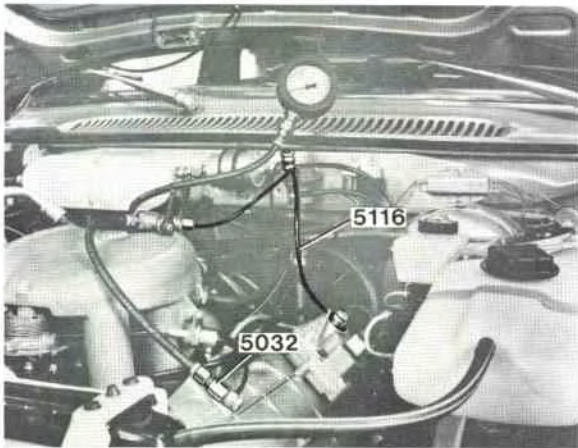
1	5102*	Hexagon spanner for adjusting CO-value (B27)
2	5116*	Hose for connecting 999 5011 (B21, B27)
3	5032*	Nipple, pressure gauge connection (B21, B27)

\* new tools



**5102\*** Hexagon spanner for adjusting CO-value (only B27)

Adjust CO-value to between 1.5 and 3.0%.

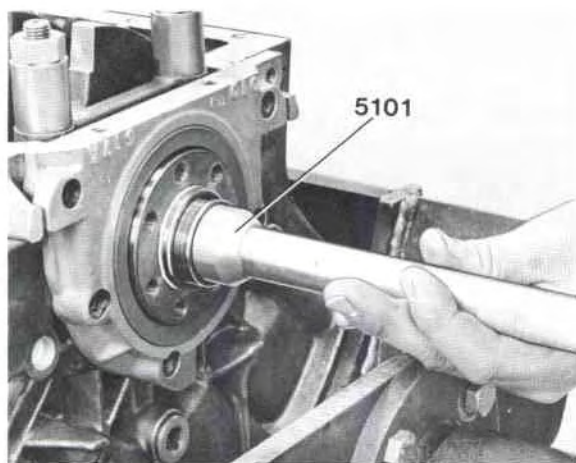


**5032\*** Nipple for connecting pressure gauge

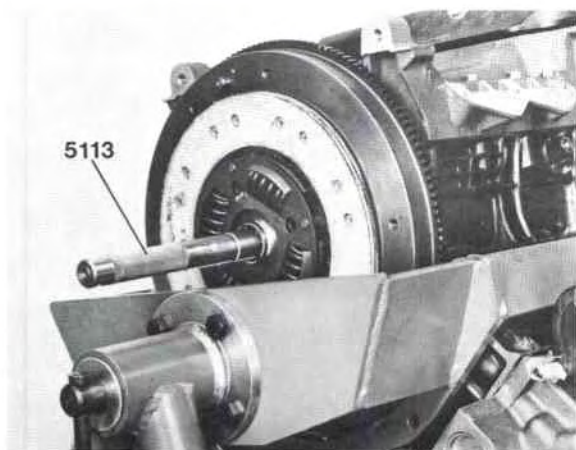
**5116\*** Hose for connecting 5011\*

## NEW TOOLS FOR CLUTCH

**5101\*** Drift for fitting crankshaft support bearing B27.



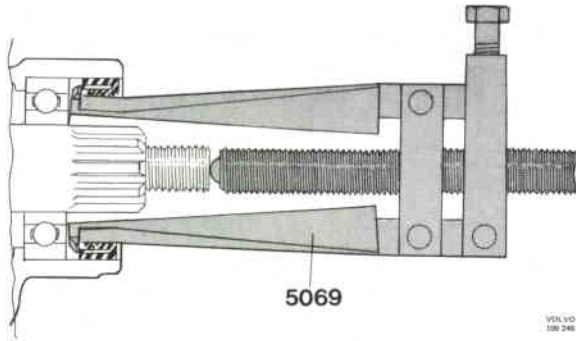
**5113\*** Drift for centering clutch.



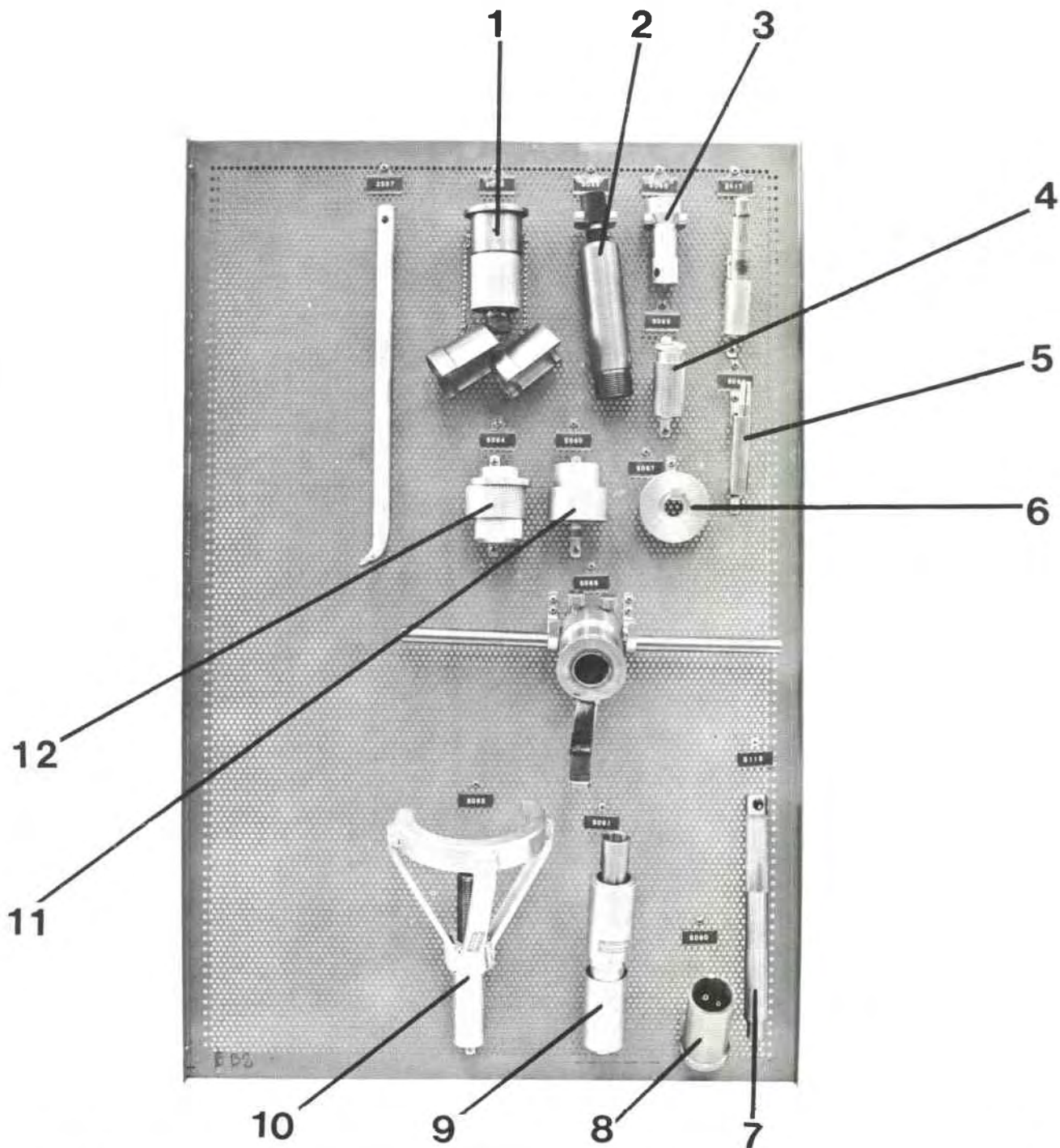
## NEW TOOL FOR M40, M41 GEARBOXES

### 5069\* Puller for flange sealing ring

Used for pulling off sealing ring (transmission in vehicle).

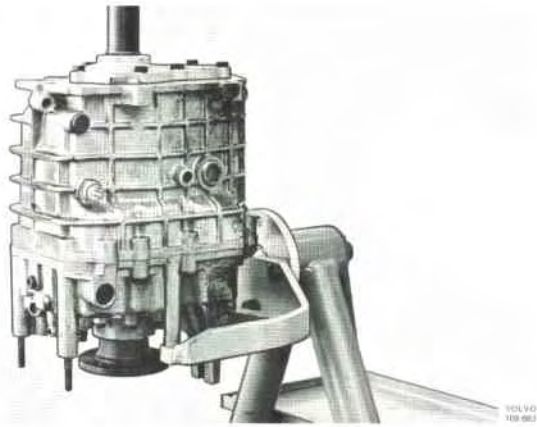


NEW TOOLS FOR M50, M51



1	5058*	Puller for disassembling transmission	6	5067*	Drift for assembling transmission
2	5059*	Extension for 999 5058, disassembling transmission	7	5113*	Drift for centering clutch
3	5080*	Drift for fitting flange lock washer	8	5090*	Sleeve for fitting in mainshaft (M51)
4	5065*	Drift for fitting gear selector shaft seal	9	5061*	Press tool for assembling transmission (M51)
5	5066*	Dowels (2), for assembling transmission	10	5063*	Puller for disassembling transmission (M51)

\* New tools



**5057\* Fixture for transmission overhaul (used together with 999 2520)**

Secure transmission with bolt for lever carrier and engine mount.



**5058\* Puller for bearing and reverse gear**

Used as in picture.

(Used together with extension 5059 for pulling off input shaft bearing, see 5059.)



**5059\* Extension for 999 5058 for pulling off input shaft bearing**

Fit puller 5058 with extension 5059.

Heat transmission housing to approx. 80°C (176°F) with, e.g., a hot air blower. Pull off bearing.



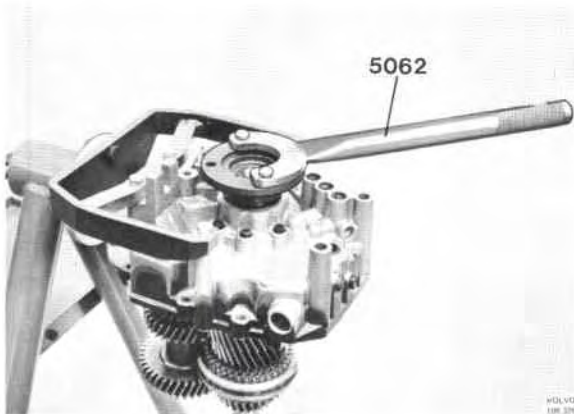
**5060\* Sleeve for assembling mainshaft**

5060 is a combination tool which is used together with 5061 and/or 5090 when assembling mainshaft. For a more detailed description of the various uses of the tool, see Service Manual.



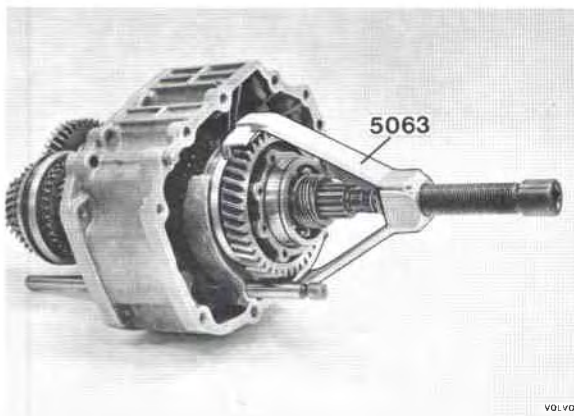
### 5061\* Press tool for assembling mainshaft

5061 is a combination tool which is used together with 5060 and/or 5090 when assembling the mainshaft. For a more detailed description of the various uses of the tool, see Service Manual.



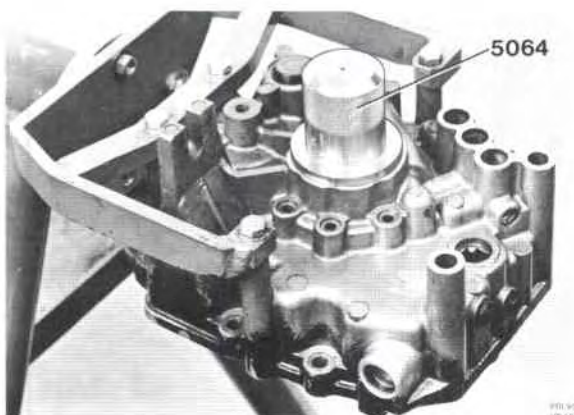
### 5062\* Counterhold for flange

Used as shown in picture.  
Tightening torque: 100 Nm (10 kpm = 72 lbftf).



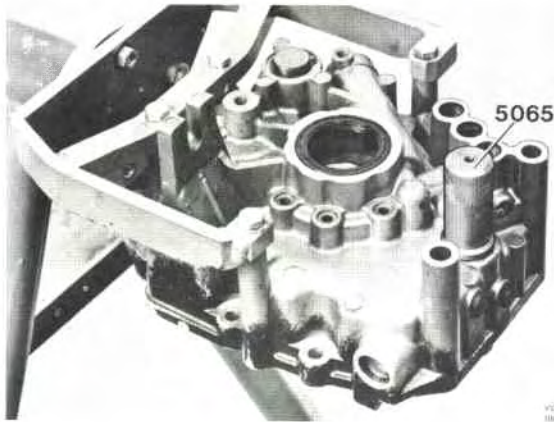
### 5063\* Puller for reverse gear, rear bearing and speedometer pinion (only M 51)

Used as shown in picture.

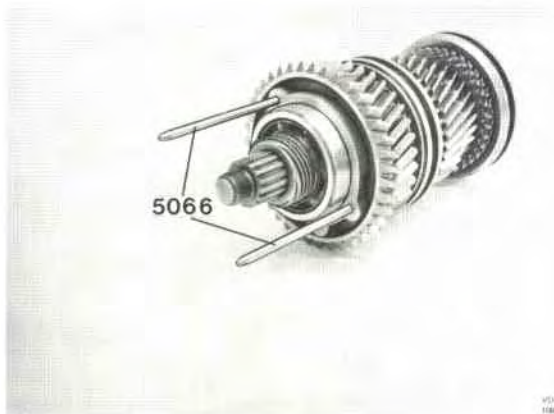


### 5064\* Drift for fitting flange sealing ring

Coat ring with sealing glue and drive it into position with drift 5064.



**5065\* Drift for fitting gear selector shaft seal**  
Drive in sealing ring with drift 5065.

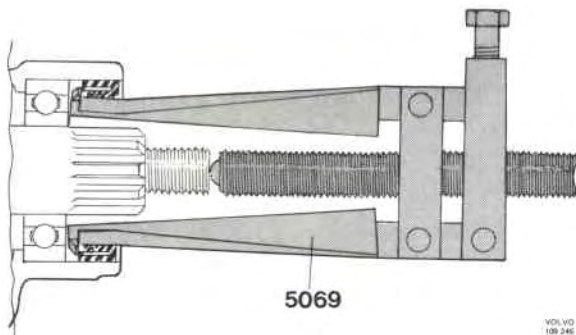


**5066\* Dowels (2) for mainshaft bearing cage when fitting rear cover**



**5067\* Drift for fitting intermediate shaft front and rear ball bearings and input shaft sealing ring**

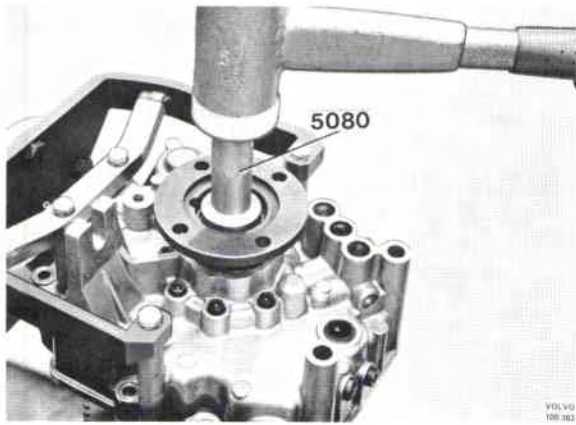
Use drift 5067 and standard handle 1801 to press bearing on to mainshaft.



**5069\* Puller for output shaft sealing ring**

Used for removing with transmission in vehicle.





**5080\* Drift for fitting flange nut lock washer**

Tap in lock washer with drift 5080. This locks the washer in the recess in the flange.

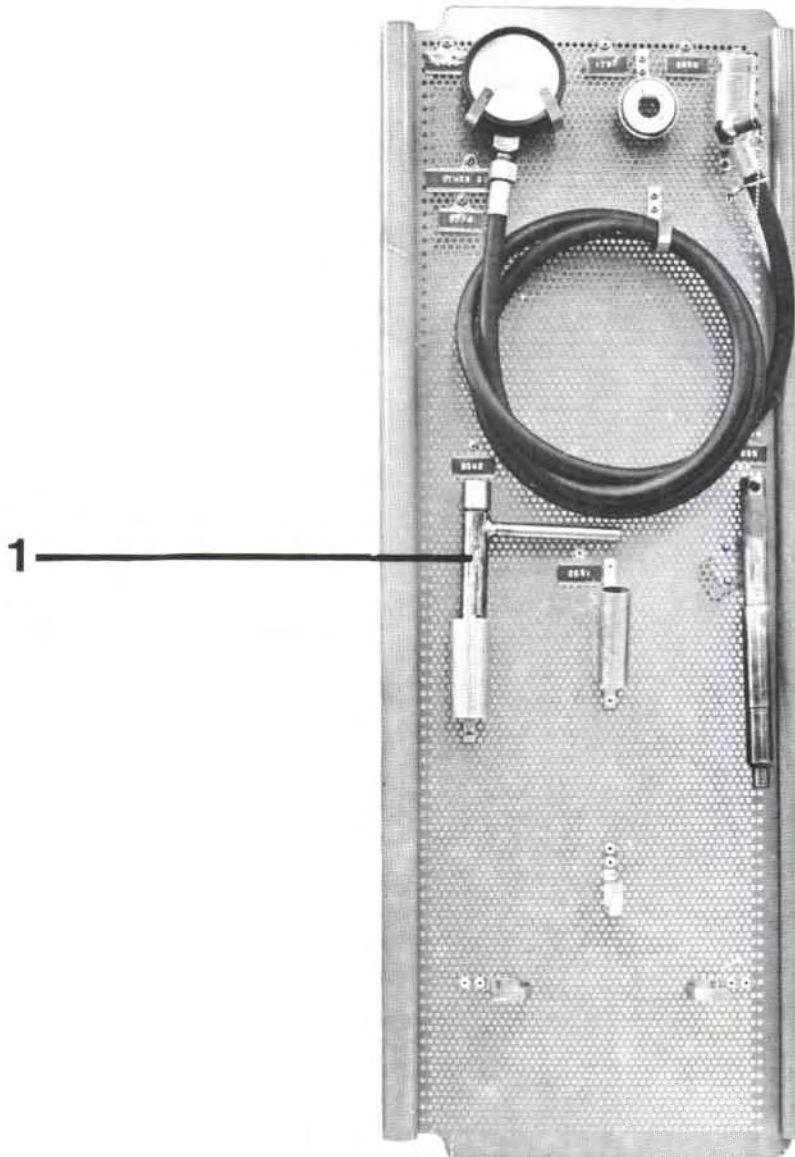


**5090\* Sleeve for assembling mainshaft**

5090 is a combination tool which is used together with 5060 and/or 5061 when assembling the mainshaft.

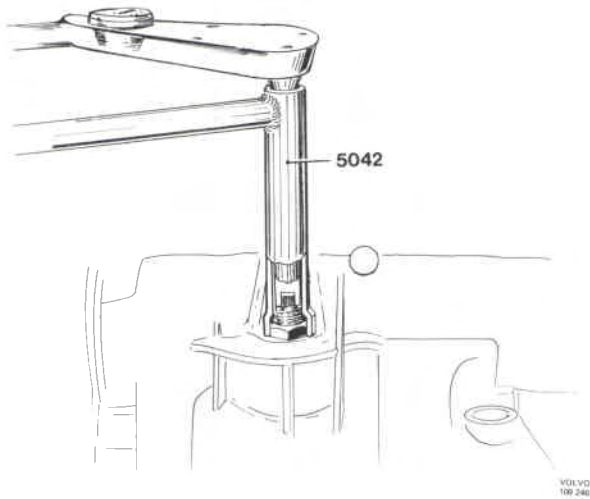
For a more detailed description of the various uses of the tool, see Service Manual.

## NEW TOOLS FOR BW35



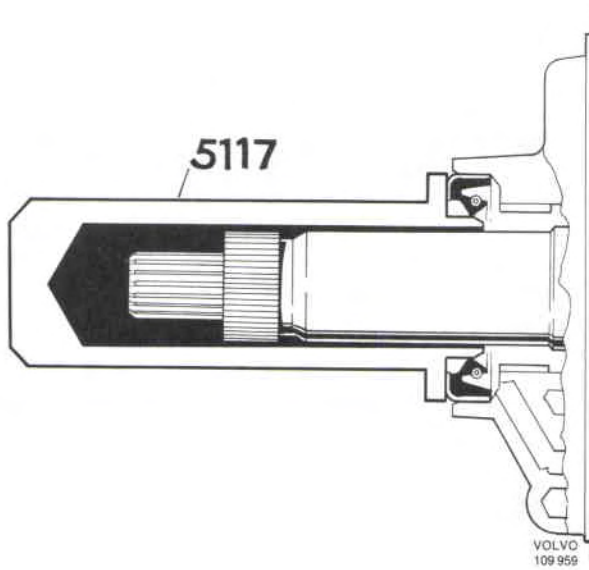
1	5042*	Spanner for adjusting rear band
	5117*	See BW55

\* new tools



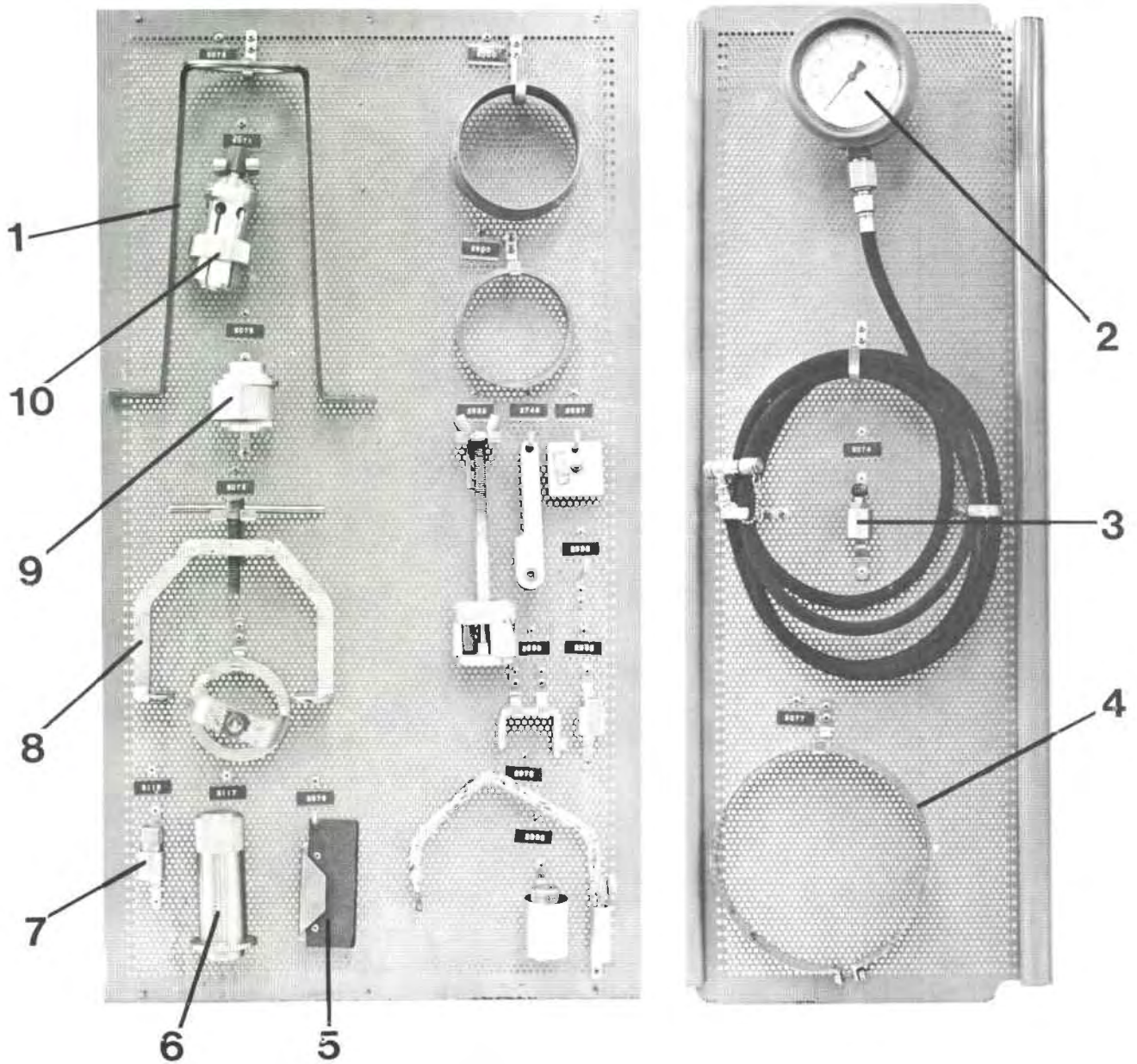
**5042\* Spanner for adjusting rear band**

This tool consists of an outer sleeve for the lock nut and an inner square sleeve for the adjuster screw. When adjusting, fit the torque wrench to the inner sleeve.



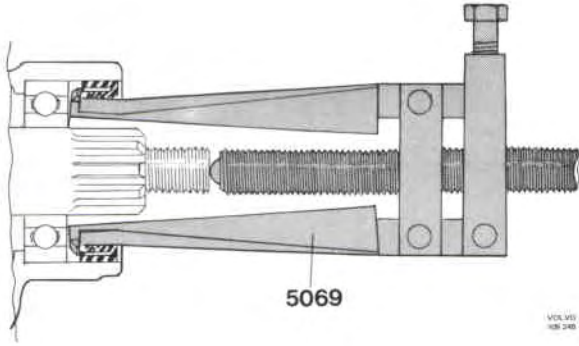
**5117\* Drift for fitting input shaft sealing ring**

## NEW TOOLS FOR BW55



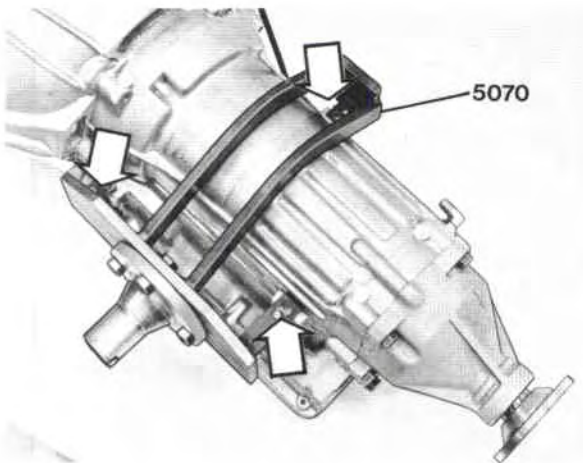
1	5073*	Press tool for disassembling and assembling pistons for brake B3	6	5117*	Drift for fitting input shaft sealing ring (also BW35)
2	5114*	Pressure gauge 0–10 kp/cm <sup>2</sup> (0–142 lbftf) for checking oil pressure	7	5118*	Drift for fitting control shaft sealing ring
3	5074*	Connection nipple for checking oil pressure	8	5072*	Press tool for disassembling and assembling clutch assembly
4	5077*	Tensioning band for assembling oil pump	9	5075*	Drift for fitting flange seal
5	5076*	Retainer for replacing oil sump in vehicle	10	5071*	Puller for pump body

\*. new tools  
34



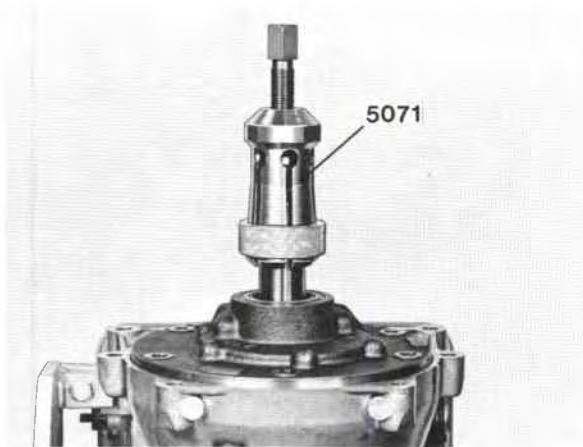
**5069\* Puller for sealing ring on flange or oil pump**

The rear seal can be removed with 5069\* with transmission in vehicle.



**5070\* Fixture for transmission overhaul (used together with 999 2520)**

Place fixture 5070 as shown in picture. Use a suitable tool with 12 mm (1/2") width across flats.



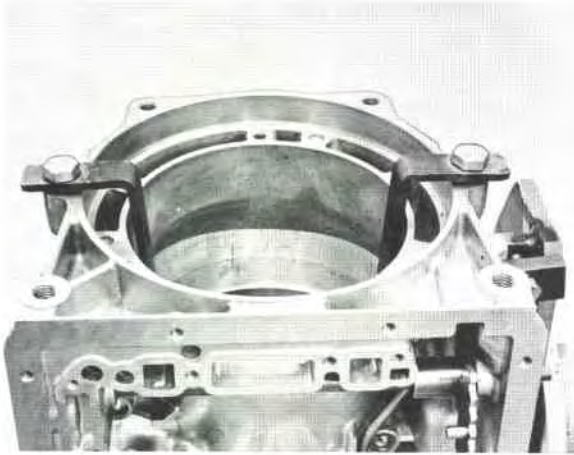
**5071\* Puller for oil pump**

Fit puller as shown in picture. Pull off pump.



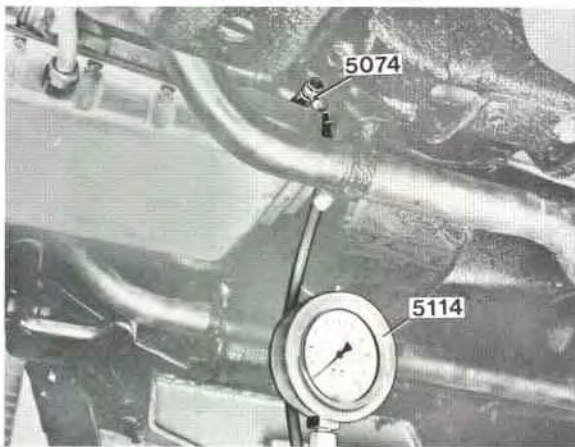
**5072\* Press tool for removing and fitting lock rings on clutch assembly**

Compress return springs and remove lock ring.  
NOTE! 5072 is suitable for C1, C2, B1 and B2.



**5073\* Press tool for removing or fitting lock ring for brake B3's pistons**

Fit tool 5073 as shown in picture. Remove bolts alternately until return springs are compressed. The lock ring can then be removed or fitted.

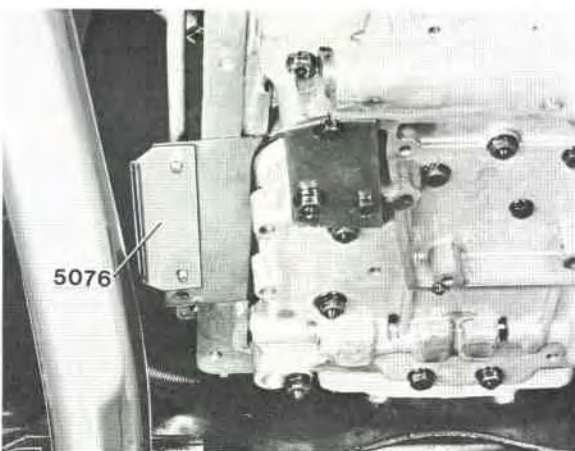


**5074\* Connection nipple for checking oil pressure (used together with 999 2531 and 5114\*)**

**5114\* Pressure gauge 0–10 kp/cm<sup>2</sup> (142 lbftf)**

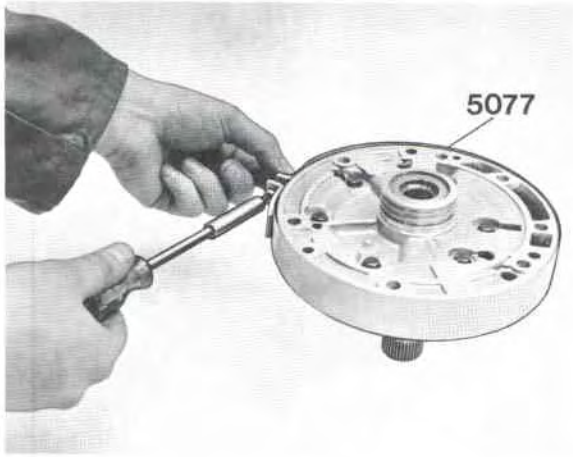


**5075\* Drift for fitting flange sealing ring**



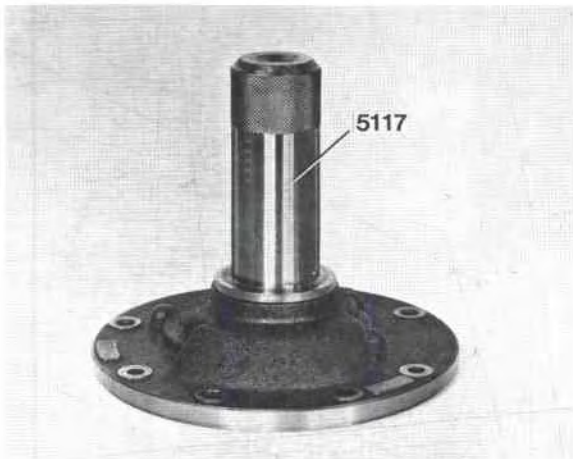
**5076\* Retainer plate for accumulator pistons**

The plate makes it possible to remove the valve bodies housing from underneath without the accumulator pistons falling out of the liners.



**5077\* Tensioning band for centering pump halves when fitting**

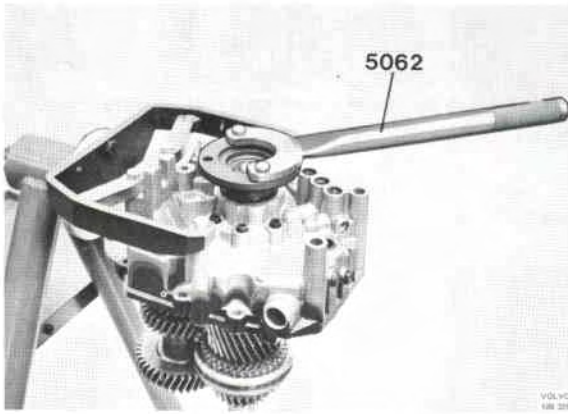
Fit tool 5077 as shown in picture.



**5117\* Drift for fitting sealing ring on oil pump**



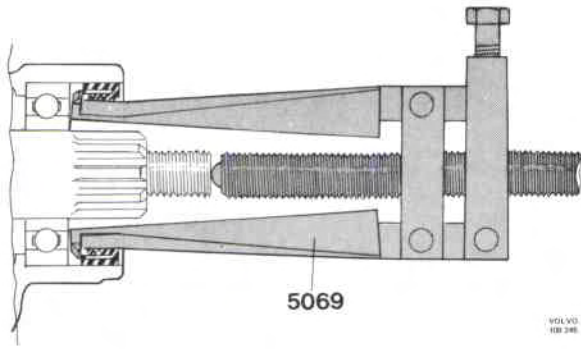
**5118\* Drift for fitting control shaft sealing ring**



## NEW TOOL FOR PROPELLER SHAFTS

**5062\* Counterhold for flange.**

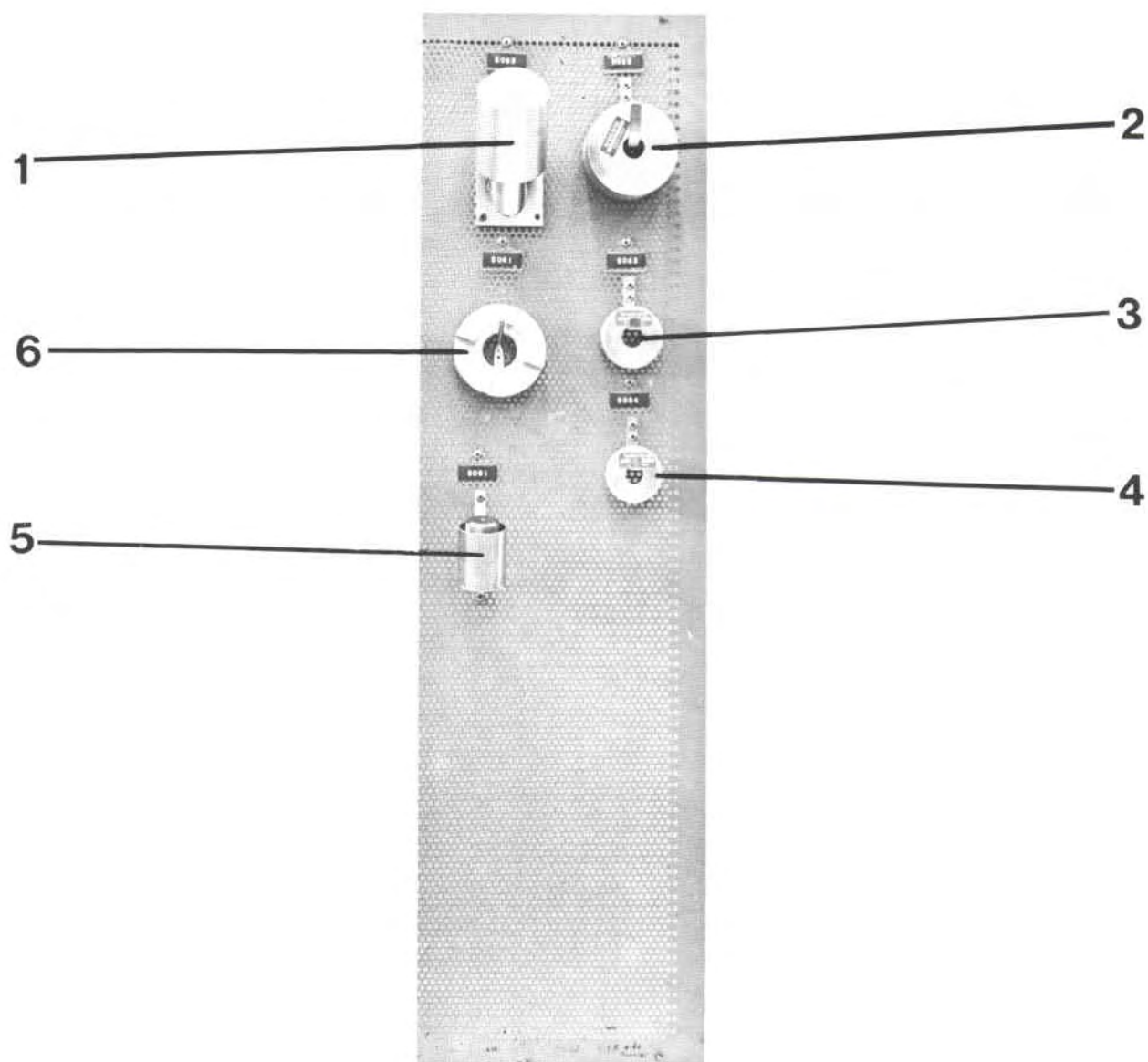




**NEW TOOL FOR REAR AXLE (1030, 1031)**

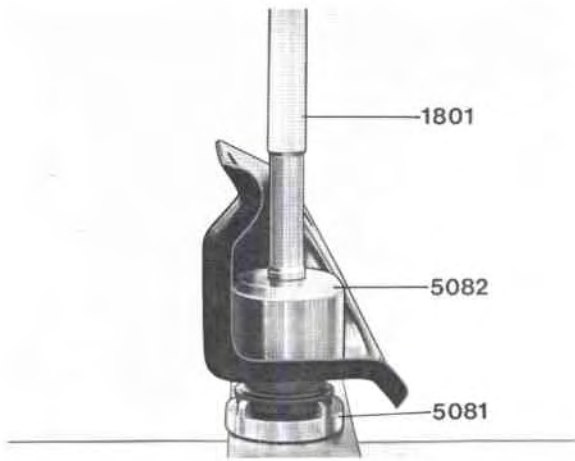
**5069\* Puller for flange sealing ring**

## NEW TOOLS FOR FRONT END, CONTROL ARMS



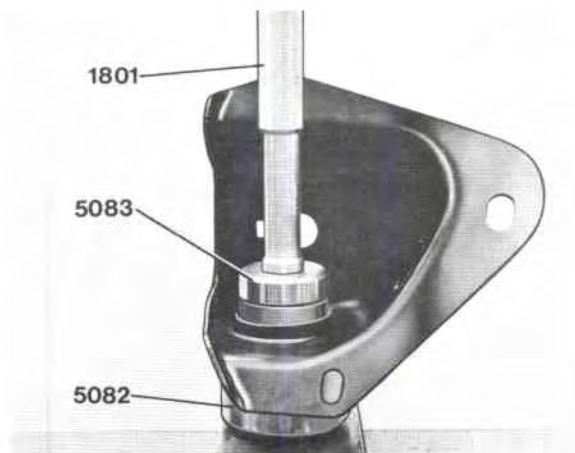
1	5085*	Sleeve for removing and fitting control arm bushing	4	5084*	Drift for fitting control arm front bushing
2	5082	Sleeve for removing and fitting control arm rear bushing	5	5091*	Drift for removing front control arm bushing
3	5083*	Drift for removing control arm rear bushing	6	5081*	Sleeve for fitting control arm rear bushing

\* new tools



**5081\* Sleeve for fitting control arm rear bushing**

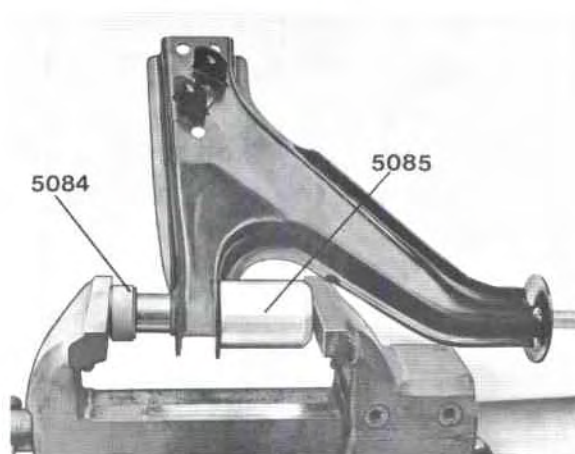
Place counterhold 5085 on flanged side of bushing and press bracket on with 5082\* extended with handle 1801. (For removal, see 5082\*.)



**5082\* Sleeve for removing and fitting control arm rear bushing**

**5083\* Drift for removing control arm rear bushing**

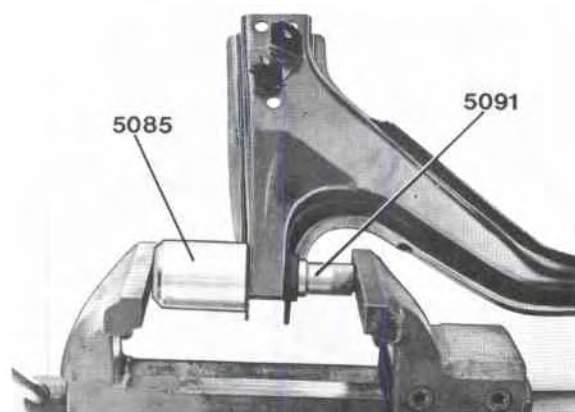
Use 5082\* as counterhold. Press out bushing with drift 5083\* extended with handle 1801.



**5084\* Drift for fitting control arm front bushing**

**5085\* Sleeve for removing and fitting control arm front bushing**

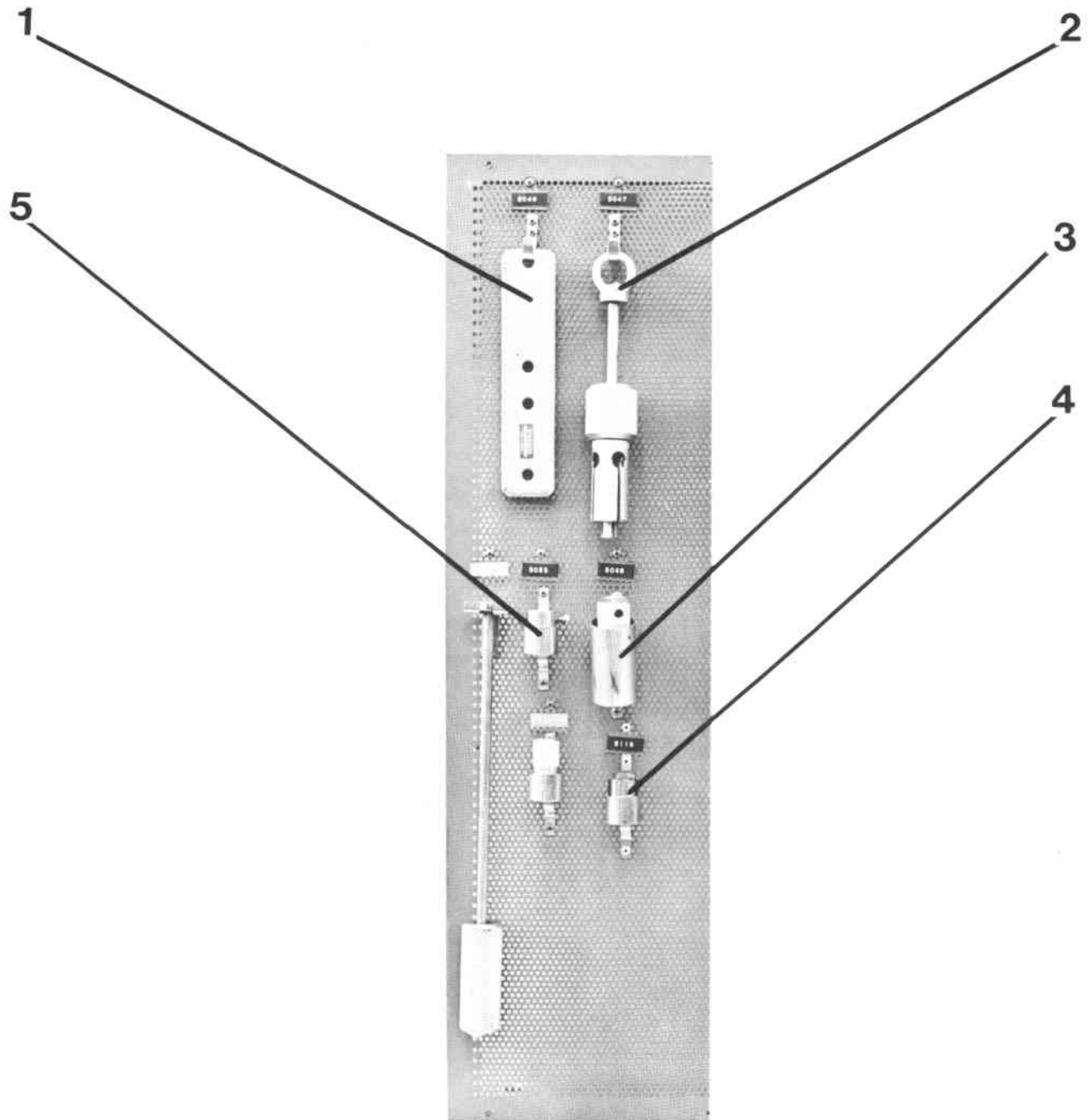
Press in the new bushing. Use counterhold 5085 and drift 5084.



**5091\* Drift for removing control arm front bushing**

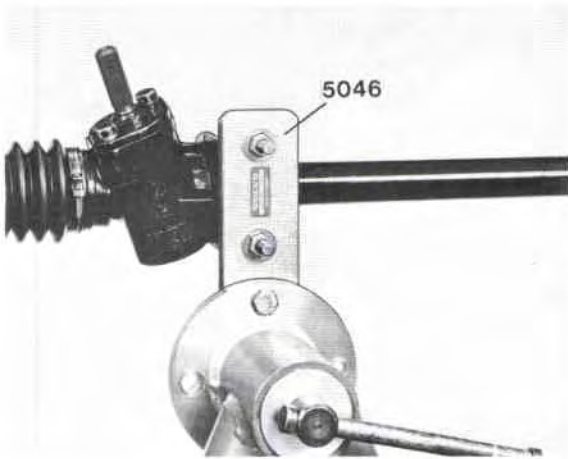
Place counterhold 5085 over flanged side of bushing and press bushing outward with drift 5091.

## NEW TOOLS FOR MANUAL STEERING GEAR



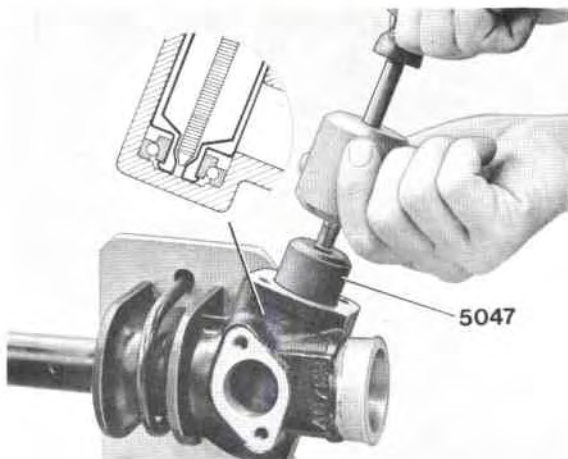
1	5046*	Fixture for overhauling steering gear (manual and power-assisted)	4	5119*	Key for lock nut upper bearing pinion ZF steering gear
2	5047*	Puller for bearing, steering gear overhaul	5	5053*	Sleeve for checking steering gear
3	5048*	Drift for fitting bearing, steering gear overhaul			

\* New tools

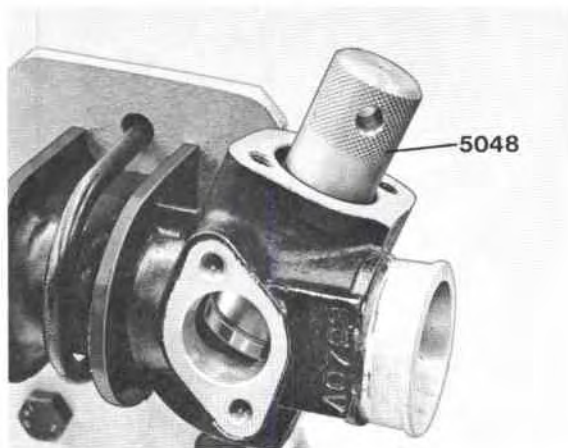


**5046\* Fixture for holding steering gear**

Used together with stand 2520.



**5047\* Puller for pinion lower bearing (Cam Gear)**

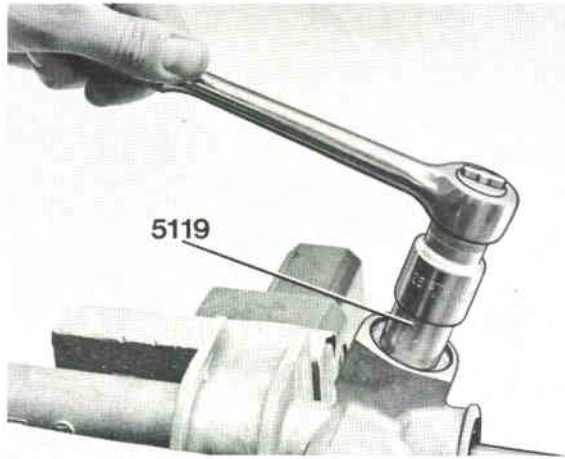


**5048\* Drift for fitting pinion lower bearing (Cam Gear)**



**5053\* Sleeve for connecting torque gauge on pinion shaft (Cam Gear)**

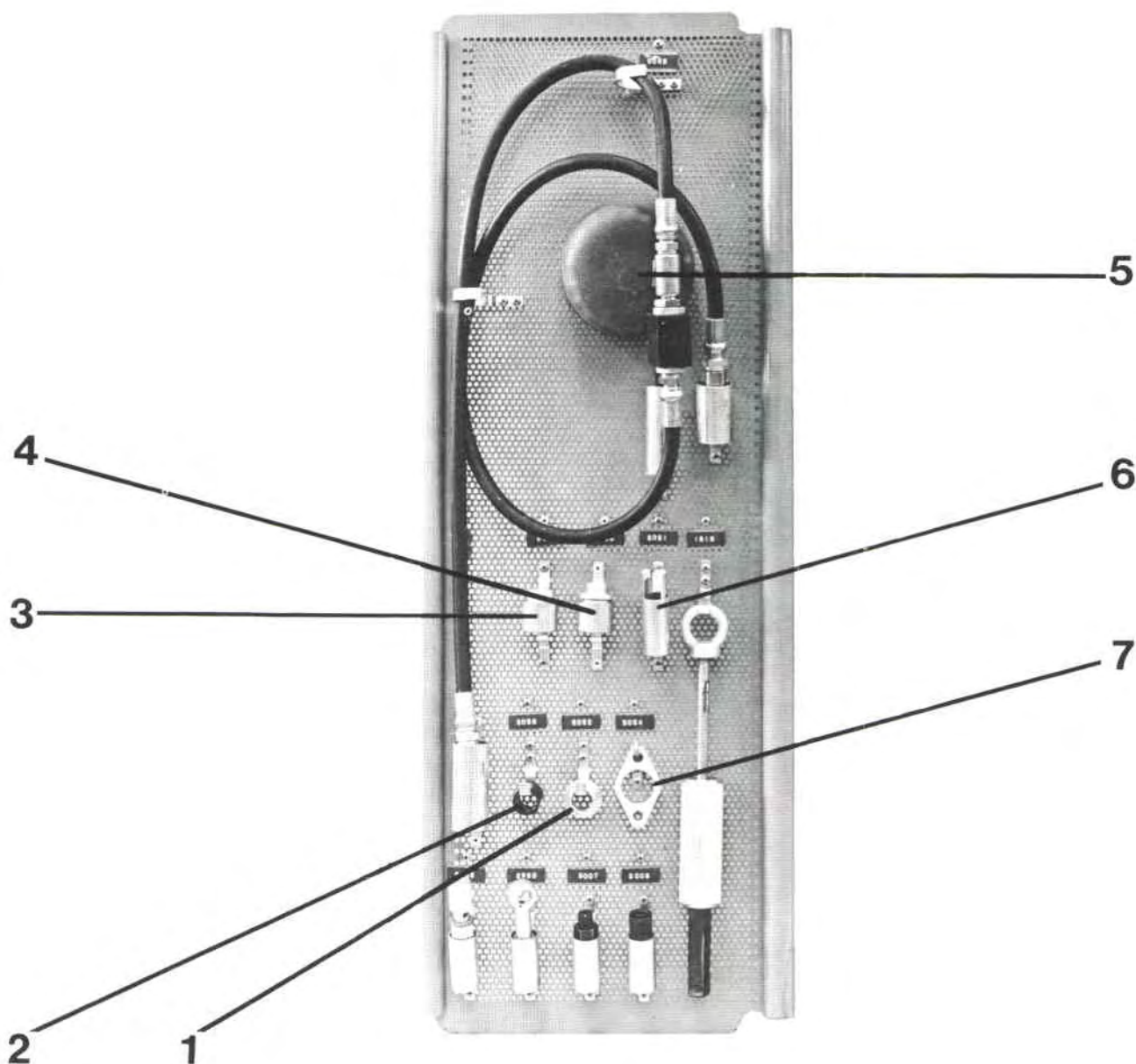
Use for check-measuring steering gear torque. Connect torque gauge with help of 5053. Crank rack back and forth between end positions. Torque should be between 0.6 and 1.7 Nm (4.3 and 12.3 lbftf). (Cam Gear power-assist: 0.9–1.7 Nm = 6.5–12.3 lbftf).



**5119\* Key for pinion nut or cover for pre-loading device (ZF-steering gear)**

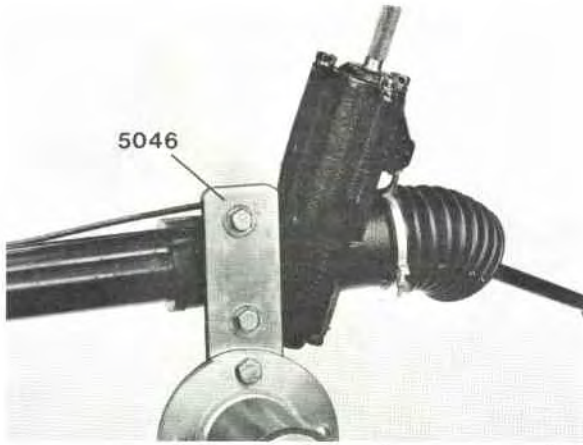
Picture shows removal/fitting of pre-loading piston cover.

## NEW TOOLS FOR POWER-ASSISTED STEERING GEAR



1	5052*	Drift for fitting bearing, steering gear overhaul	5	5055*	Instrument for testing power-assist balance, oil pressure
2	5056*	Sleeve for fitting seal, steering gear overhaul	6	5051*	Puller for bearing and seal, steering gear overhaul
3	5049*	Sleeve for adjusting power-assist balance, steering gear	7	5054*	Cover for adjusting power-assist balance
4	5050*	Drift for fitting seal, bearing, steering gear overhaul			

\* New tools



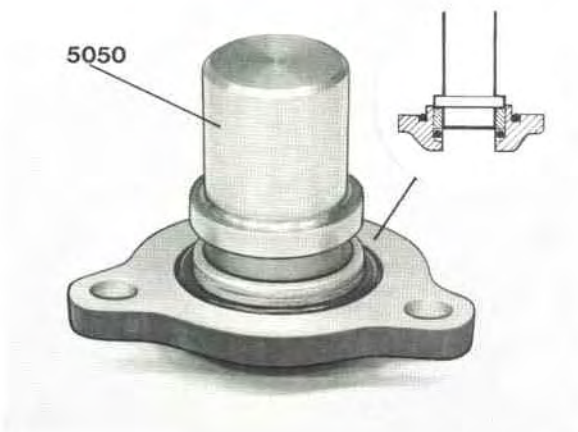
**5046\*** Fixture for holding steering gear



**5049\*** Sleeve for lower bearing when adjusting power-assist balance

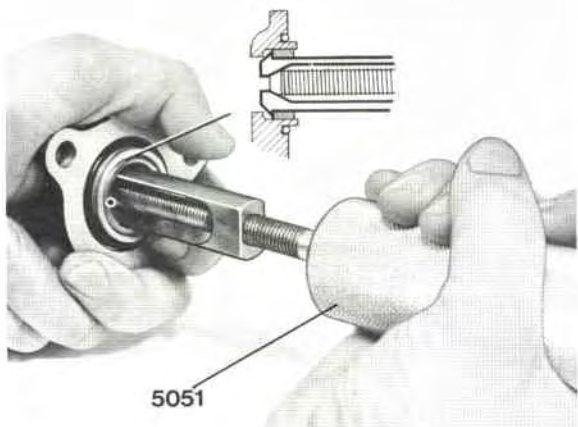
(incl. cover 5054\*)

5049\* concerning adjustment, see Service Manual. Used also for fitting/removing inner bearing race with ball retainer and outside outer ring from pinion.



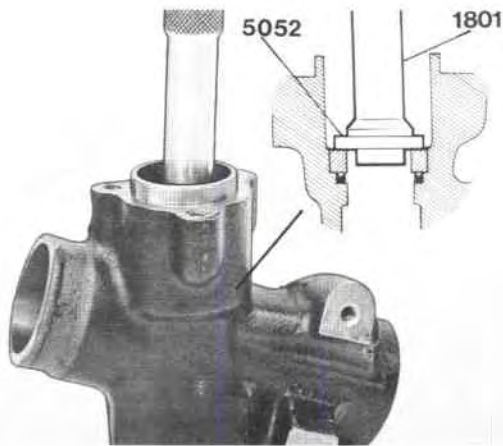
**5050\*** Drift for fitting seal and bearing in valve housing cover

Drive on oil seal, bearing and O-ring with drift 5050\*.



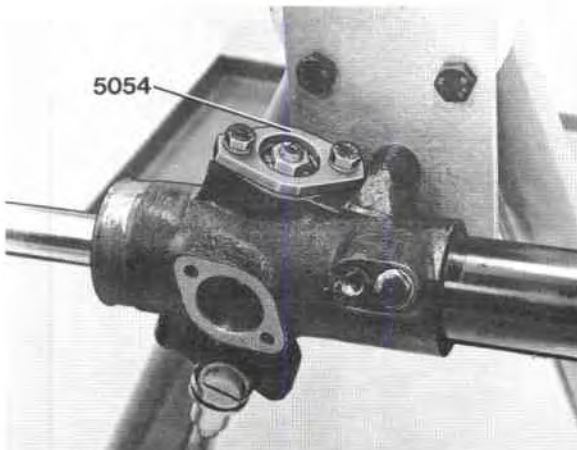
**5051\*** Puller for bearing and seal in cover for valve housing. (Used together with 5047.)





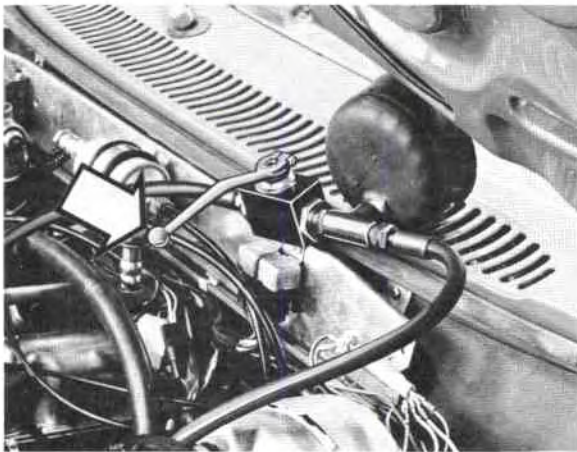
**5052\*** Drift for fitting slide bearing in steering box. Used together with 1801

Fit as in picture.



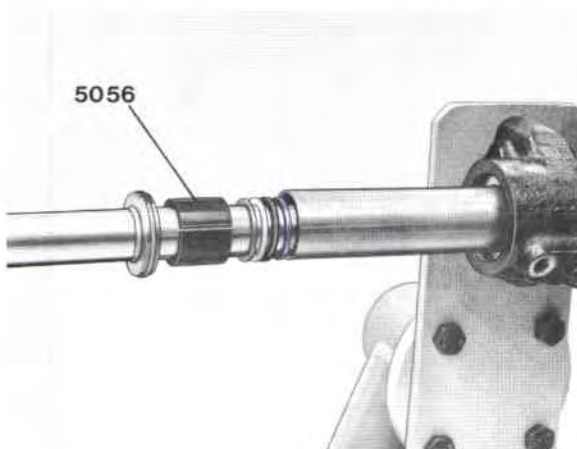
**5054\*** Cover for pinion when adjusting power-assist balance

Replaces standard cover when adjusting power-assist balance.



**5055\*** Instrument for checking oil pressure. Used together with nipples 2865 and 2990

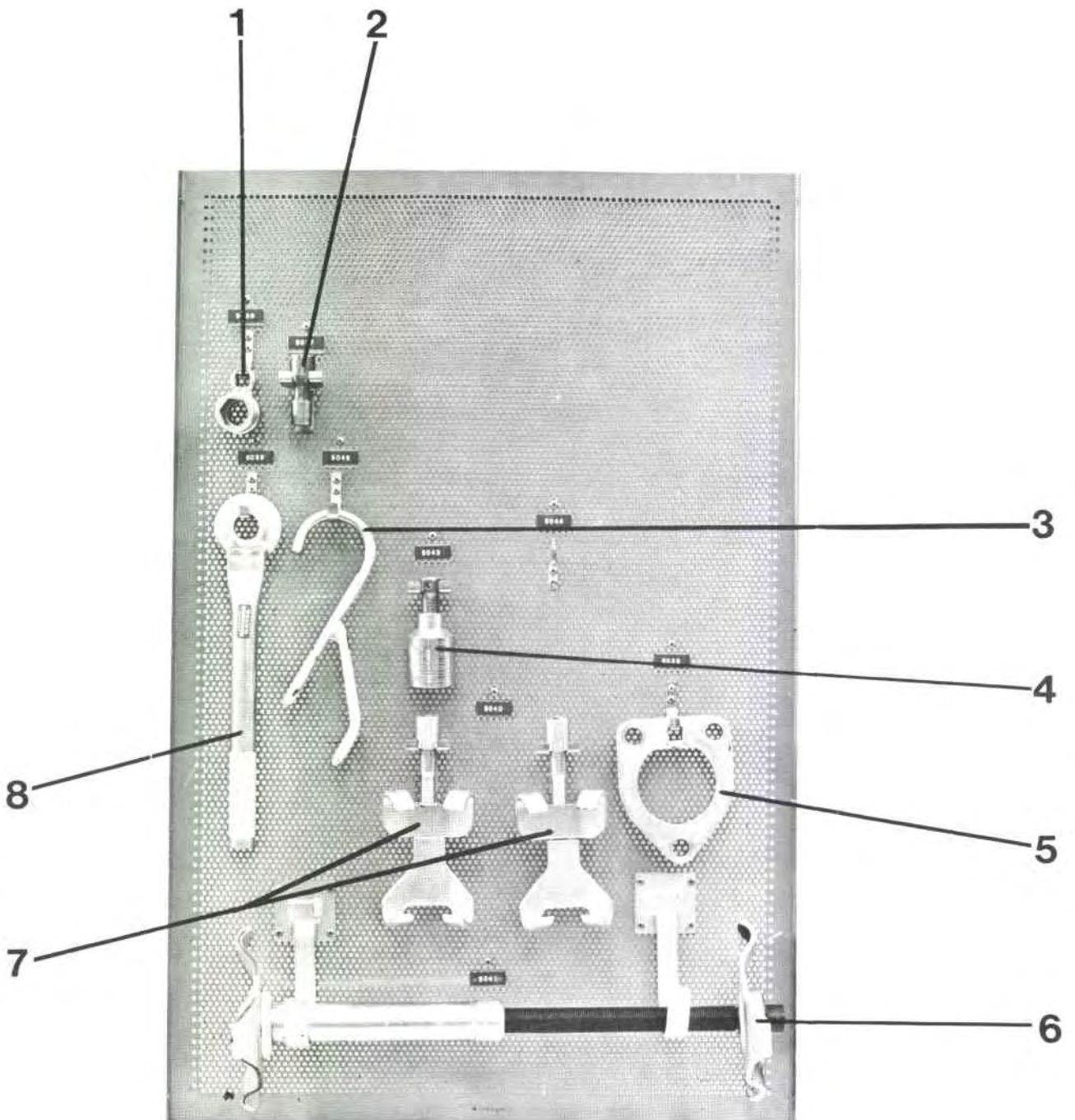
NOTE! The hose is connected from the cock on the instrument to the steering gear.



**5056\*** Sleeve for pressing seal into rack

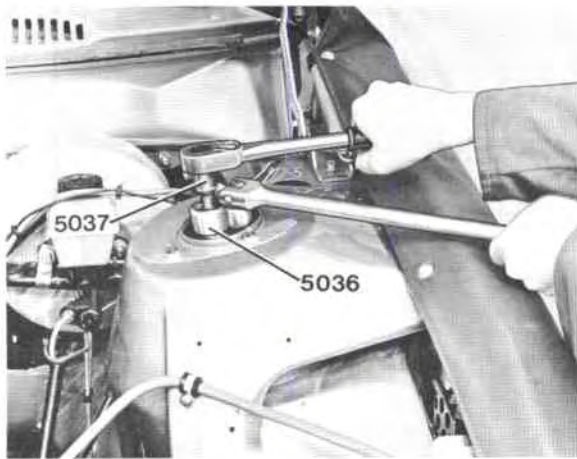
Insert rack with seal and spacer rings in the inside pipe and fit mounting sleeve 5056.

## NEW TOOLS FOR FRONT END, SPRING AND STRUT



1	5036*	Spanner for shock absorber replacement	5	5036*	Spanner for shock absorber replacement
2	5037*	Retaining tool for shock absorber replacement	6	5041*	Press tool for spring replacement
3	5045*	Retaining hook for shock absorber replacement	7	5040*	Compressing tool for shock absorber spring replacement
4	5043*	Puller for steering rod	8	5039*	Hook spanner for shock absorber replacement

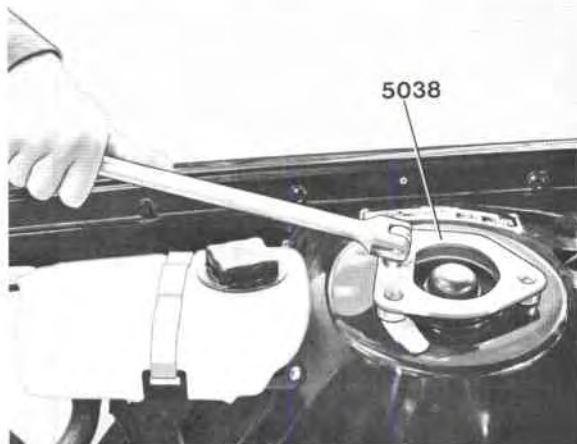
\* new tools  
48



**5036\*** Spanner for nut on shock absorber shaft

**5037\*** Spanner for retaining shock absorber shaft when releasing and tightening nut

Release nut with 5036\* and hold shaft firmly with 5037\*.



**5038\*** Tool used on strut journaling when adjusting camber

Use 5038\* as shown in picture. Adjust camber angle to +1° to +1.5°.



**5039\*** Hook spanner for strut nut when replacing shock absorber

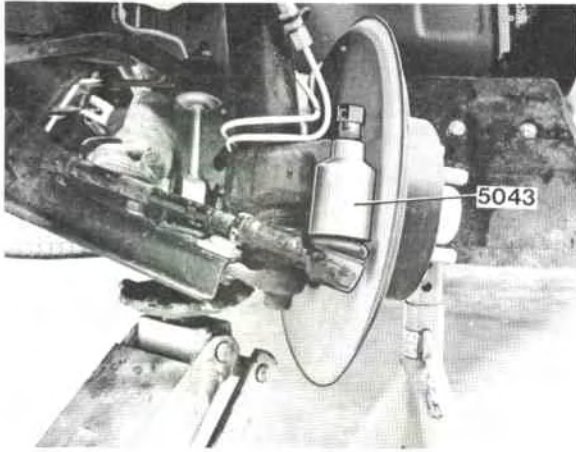
Release nut with 5039\* while holding firmly weld joint on strut with pliers.



**5040\*** Compressing tool for spring when removing/installing strut assembly and when replacing spring

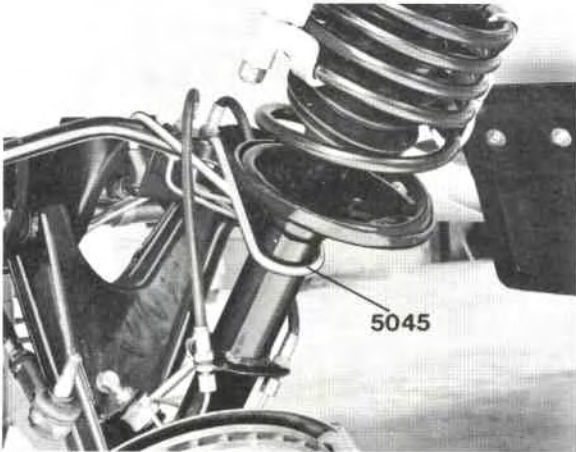
**5041\*** Press tool for loose spring when fitting or removing 5040\*

Hook the compressing tools 5040\* (two) securely with three clear spring coils between the hooks.



**5043\* Puller for steering rod**

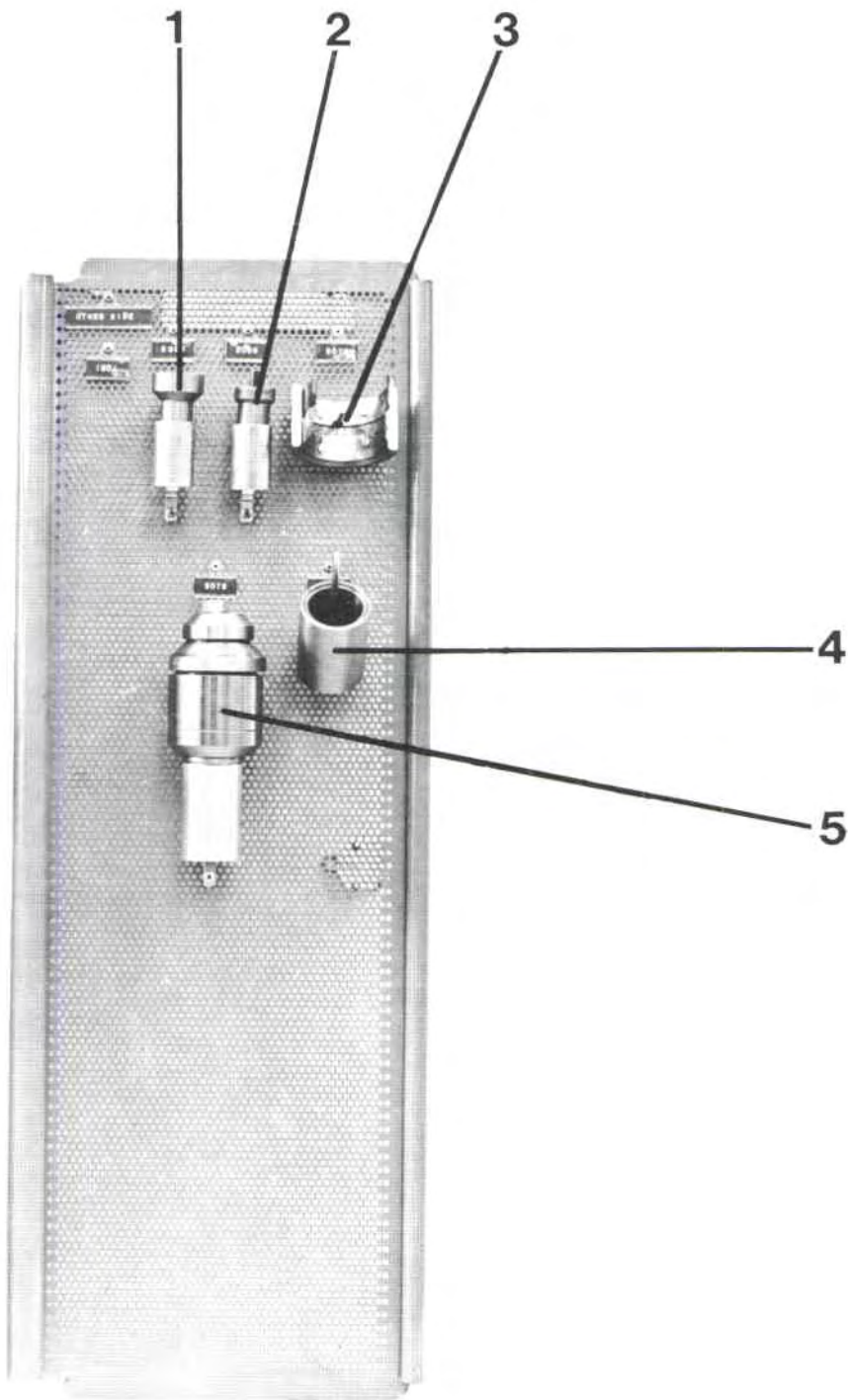
Use puller as shown in picture.



**5045\* Retaining hook for strut assembly**

Hook retaining tool 5045\* round the strut assembly and stablizer.

## NEW TOOLS FOR REAR SUSPENSION



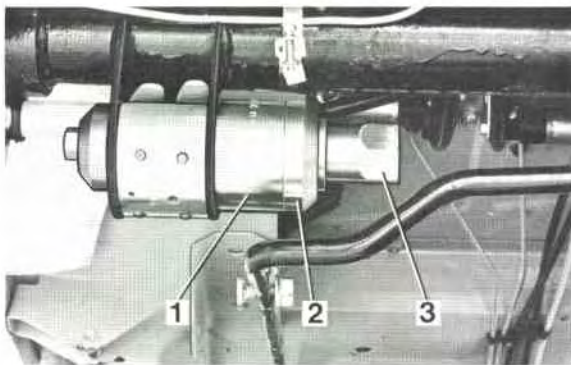
1	5088*	Drift for replacing reaction rod bushing	4	5087*	Sleeve for replacing trailing arm, reaction rod
2	5086*	Drift for replacing reaction rod bushing	5	5078*	Press tool for replacing trailing arm bushing
3	5079*	Spacer for replacing trailing arm bushing			

\* New tools



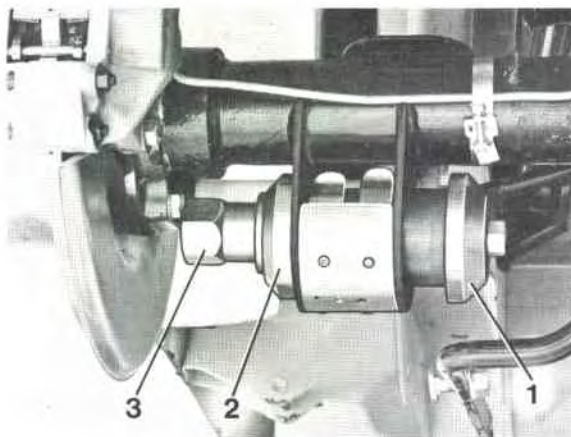
**5078\*** Press tool for trailing arm bushing in rear axle casing

**5079\*** Spacer for replacing trailing arm bushing in rear axle casing



The picture shows how tools 5078\* and 5079\* are used together to **remove** the trailing arm bushing.

1. Sleeve marked "B"
2. Drift marked "A"
3. Pull nut



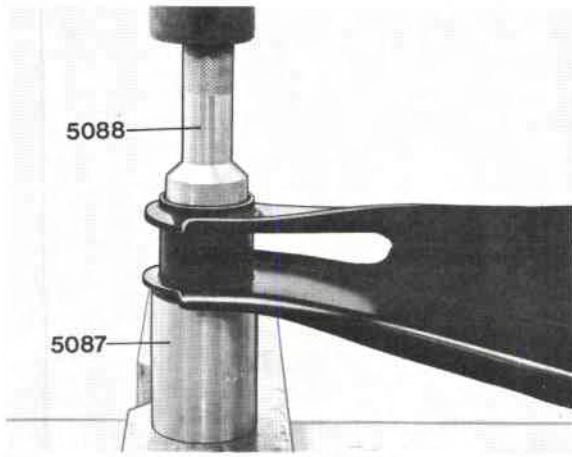
This picture shows how tools 5078\* and 5079\* are used together to **fit** the trailing arm bushing.

1. Drift marked "D"
2. Drift marked "A"
3. Pull nut



**5086\*** Drift for removing and fitting reaction rod bushing

Use 5086\* together with 5087\*.



**5087\*** Sleeve for removing and fitting bushing in reaction rod (together with 5086\*) or for removing and fitting trailing arm front bushing (together with 5088\*, see picture).

**5088\*** Drift for removing and fitting trailing arm front bushing











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Engelska  
Printed in Sweden