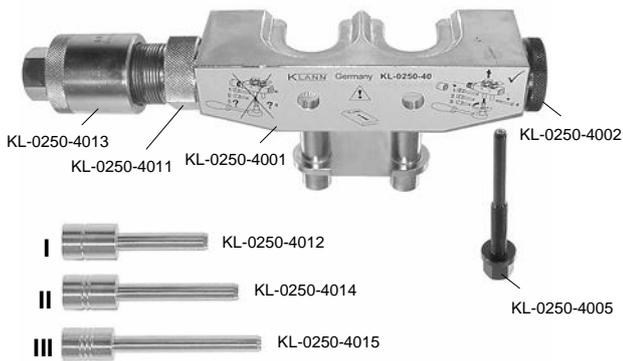


Fig. 1: KL-0250-40



Accessories:
KL-0250-402 - Supplementary pressure drift set

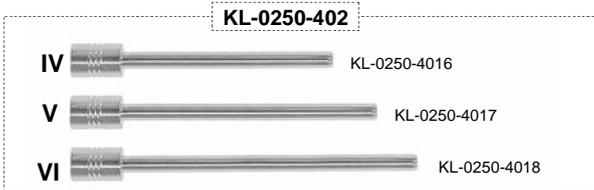


Fig. 2: Tool-body mounted.

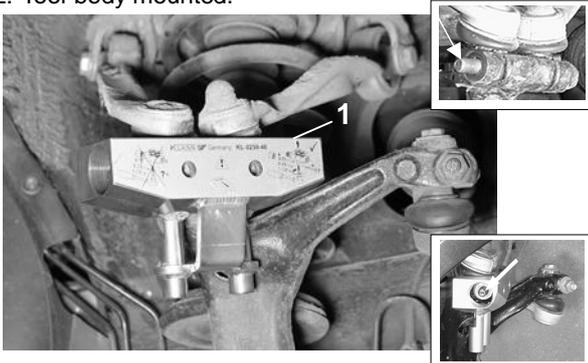
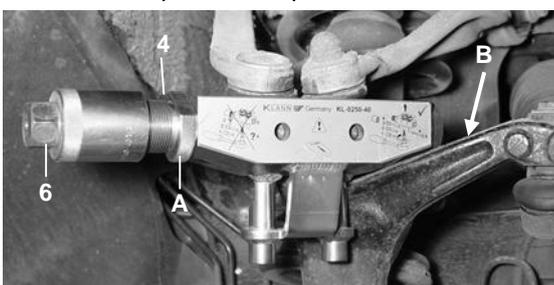


Fig. 3: Retaining bolt removal (pressure drift I).



Fig. 4: Procedure repeated with pressure drift II.



KL-0250-40 Extractor for Clamping Bolt and Ball Joint

(Pat.)

Suitable for Audi A4 (up to 2000) / VW Passat front axle (up to 2005).

Application

Designed for the removal of the upper wishbone pivot pin out of the steering knuckle clamping bore.

The removal of the long retaining bolt securing the double ball-joints is a serious problem, due to the severe corrosion leading to the bolt becoming extremely stubborn to remove.

Previously the only method has been a hammer and drift, which is not only time-consuming, but entails greater risks to the mechanic, and also risks damage to the suspension components.

The extractor KL-0250-40 allows a quick, easy and risk-free extraction of the long retaining bolt and both ball-joints. The tool functions for both left and right hand-sides of the suspension.

Advantages

- Time savings of between 2 and 3 hours .
- No risk of damage to the suspension components.

Technical Data

Weight: 2.4 kg

Warnings and Notes

- Any work on vehicles should only be performed by qualified personnel observing and complying with the directions, provisions, and safety regulations issued by the vehicle manufacturer.
- The vehicle manufacturer's data apply to all works done on the vehicle.
- All specific vehicle data stated herein are supplied under reserve and without commitment.

Application

Removal of upper wishbone ball-joints figures show the left side of the vehicle:

1. Raise the vehicle on a lift and remove the road-wheel.
2. Remove the hex. nut from the retaining bolt. (Fig.2 arrow)
3. Mount the tool-body **Pos.1** without the threaded adaptor **Pos.2** or the pressure bolt **Pos.3** carefully onto the wishbone as shown in Fig.2. Take care to avoid damage to the rubber gaiters. When the tool-body is correctly mounted the retaining bolt will be centralised in the threaded bore of the tool-body. (Fig.2 arrow)

Note: some wishbones have a sharp casting-lip as shown in Fig.4 arrow "B". In this case the lip should be ground or filed away before the tool-body is mounted.

4. Insert the threaded adaptor with the large bore **Pos.2** into the tool-body **Pos.1** on the side where the hex. head of the retaining bolt is to be found. (Fig. 3 / arrow "C")
5. Screw housing **Pos.4** with pressure drift **Pos.5** and hex. nut **Pos.6** into the tool-body **Pos.1** (Fig.3/4). Hex. nut **Pos.6** should be fully backed-off at this stage. When correctly mounted, the shoulder "A" of the housing should butt up to the tool-body **Pos.1**, which also provides correct axial alignment of the tool-body to the wishbone.
6. Rotate the hex. nut **Pos.6** with a ½" impact-gun until the nut touches shoulder "A" on the housing **Pos.4** (a severely corroded retaining bolt will make a sharp, loud noise when yield-point is reached). (Fig.3/4).

Fig. 5: Retaining bolt completely pressed out.

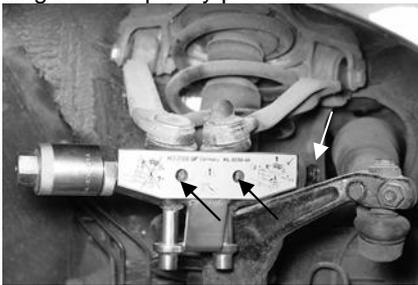


Fig. 6: Clamping bore is clear.

A

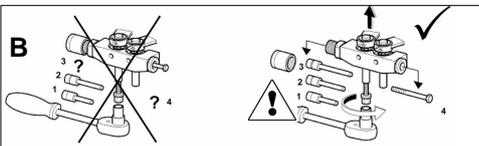
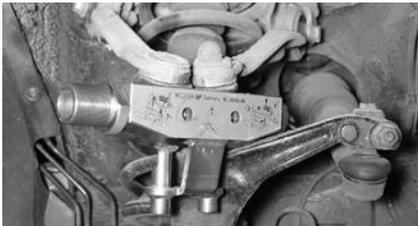
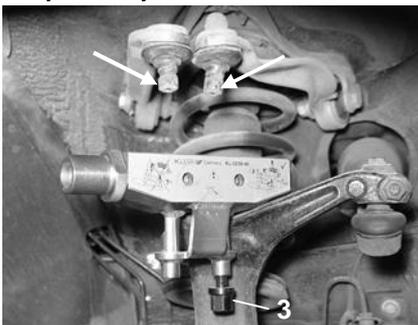
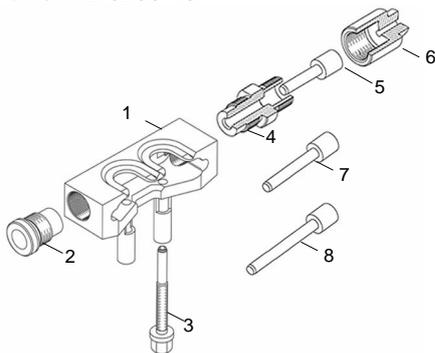


Fig. 7: Both ball-joints fully extracted.

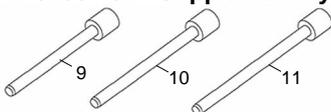


Spare Parts: KL-0250-40

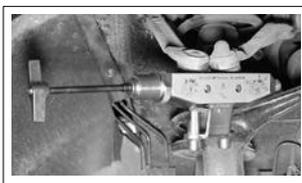


Accessories:

KL-0250-402 - Supplementary Pressure Drift Set



KL-0250-403 - Pressure Drift Puller



Attention: When pressing out heavily corroded retaining bolts a buckled bead can occur at the end of the bolt shaft. The buckled bead has to be removed, e.g. with an abrasive cutting-off machine. Therefore the tool has to be dismantled and, after removal of the buckled bead, being remounted as described in point 3 to 5. After that move on with the impact gun procedure.

7. Remove hex. nut **Pos.6** and insert pressure drift II and repeat the impact-gun procedure. In the event that the retaining bolt remains tightly held in the bore, repeat the procedure after inserting pressure drift III.
8. Extract the hex. retaining bolt completely. For the case, that the hex. retaining bolt can't be extracted completely, there is a supplementary pressure drift set **KL-0250-402**, to extract it completely.
9. Take hex. nut **Pos.6** and pressure drift **Pos.5, 7** or **8** from the housing **Pos.4**, so that the clamping bore is clear (**Fig.6 A**).

⚠ Attention:

Before activating the pressure screw **Pos.3**, ensure the pressure drifts I, II and III etc. as well as the hex. retaining bolt have been extracted (**see Fig.6 B**).

By non-observance the tool will be damaged.

10. Press out both ball joints with the pressure screw **Pos.3** (**Fig.6/7**).
11. Screw out the pressure screw completely **Pos.3** and extract tool body **Pos.1** by loosening the thread adaptor **Pos.2** and the housing **Pos.4** from the steering stub.

Note: In the case of severely corroded retaining bolts it will be advantageous to insert two pry bars into the front slits of the clamps see arrow in **Fig. 5**. The width of the 2 pry bars should correspond with the dimension of the original slits. The clamping-slits of the ball-joint retaining housings must not be forced wider apart than their original width !!!

Note

Hex. nut **Pos.6**, pressure screw **Pos.3** and pressure drifts have to be greased with molybdenum disulphide paste **KL-0014-0030** before working.

Spare Part List

Pos.	Part No.	Description	Qty.
	KL-0250-40	Extractor for Clamping Bolt and Ball Joint	1
consists of:			
1	KL-0250-4001 A	Tool body	1
2	KL-0250-4002	Thread adaptor (with big bore)	1
3	KL-0250-4005	Pressure screw M10x1.25 x 95 mm	1
4	KL-0250-4011	Housing	1
5	KL-0250-4012	Pressure drift I (Length 78 mm)	1
6	KL-0250-4013	Nut	1
7	KL-0250-4014	Pressure drift II (Length 98 mm)	1
8	KL-0250-4015	Pressure drift III (Length 118 mm)	1
	KL-0014-0030	Molybdenum disulphide paste 50g (not ill.)	1

Accessories

KL-0250-402 - Supplementary Pressure Drift Set

Used to press the hex clamping bolt completely out of the clamping bore.

Pos.	Part No.	Description	Qty.
	KL-0250-402	Supplementary Pressure Drift Set	1
consists of:			
9	KL-0250-4016	Pressure drift IV (Length 138 mm)	1
10	KL-0250-4017	Pressure drift V (Length 158 mm)	1
11	KL-0250-4018	Pressure drift VI (Length 178 mm)	1

KL-0250-403 - Pressure Drift Puller

The pressure drift puller **KL-0250-403** enables the pressure drifts to be pulled out of the tool body.