

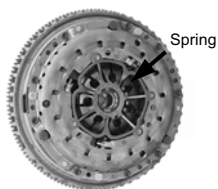
KL-0500-40 K

SAC-clutches
(3 hole pitch)



Application:

Self-Adjusting-Clutch (SAC)



Centering clutch plate



Putting on pressure plate



Pretensioning clutch



Turning back adjuster ring



KL-0500-40 KA

SAC-clutches
(3 / 4 hole pitch)



KL-0500-40 K SAC Clutch Tool Set

in Plastic Case

(German Utility Model)

Applicable for SAC-Clutches (3 hole pitch) e.g. VW-Audi, BMW, Mercedes, Volvo, Opel/Vauxhall, Renault etc.

The tool set **KL-0500-40 K** is necessary to remove and install SAC (Self-Adjusting-Clutch) clutches quickly and expertly.

The SAC-Clutch can be recognized by the small springs of the adjusting ring in the pressure plate. Without this tool set the correct installation of the clutch is almost impossible, as the clutch can be uptight or damaged and, as a consequence, it cannot be disengaged or it „scrapes“. The tool set **KL-0500-40 K** prevents the damaging of the SAC-Clutch during removal and new installation, as well as the twisting of the adjuster ring inside the pressure plate.

Operation:

Before removal, pre-tension the clutch pressure plate by means of the clamping device.

⇒ For this purpose unscrew the three fastening screws and screw three thread bolts in their place. Place the pretension jack on the thread bolts and fix them with the knurled nuts. Screw the compression strut to the clamping device until the diaphragm spring reaches the limit stop. Screw out the remaining fastening screws, unstress the diaphragm spring and the pretension jack and remove the clutch pressure plate.

Centering clutch plate:

⇒ Insert the centering tool and the clutch plate together with a suitable centering dome into the fly wheel.

Putting on pressure plate:

⇒ Put the pressure plate on the fly wheel and install the clutch pretensioner as during removal. Stress the diaphragm spring up to the limit stop position and screw the relative fastening screws.

Advantage:

- ⇒ Pretensioning the clutch pressure plate when removing and installing (important as a means of avoiding distortion).
- ⇒ Centring the clutch plate in relation to the guide bearing or pressure plate.
- ⇒ Moving back the adjuster ring in conjunction with resetting tool **KL-0500-403**.

Note: The most types of SAC clutches have 3 hole pitch but in some cars e.g. Mercedes A class (from 2004 onwards [W169]) you can find SAC clutches with 4 hole pitch. For those types you need the supplement kit **KL-0500-4014**.

Specification: (Single tools see page 7-03)

Part-No.	Description	Qty.
KL-0500-401	Clutch pretensioner	1
KL-0500-402	Clutch Aligner	1
KL-0500-403	Resetting Tool	1
KL-0500-404	Clutch Mandrel Set	1
KL-0500-4090	Plastic case [empty]	1

KL-0500-40 KA SAC Clutch Tool Set

in Plastic Case

(German Utility Model)

As **KL-0500-40 K**, but applicable for SAC-clutches (3 and 4 hole pitch) e.g. VW-Audi, BMW, Mercedes, Volvo, Opel/Vauxhall, Renault etc.

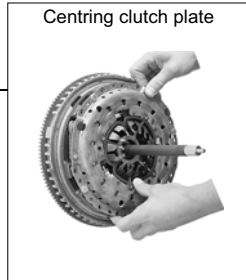
Specification: (Single tools see page 7-03)

Part-No.	Description	Qty.
KL-0500-401	Clutch pretensioner	1
KL-0500-402	Clutch Aligner	1
KL-0500-403	Resetting Tool	1
KL-0500-404	Clutch Mandrel Set	1
KL-0500-4014	Supplementary set (4 hole pitch)	1
KL-0500-4090	Plastic case	1

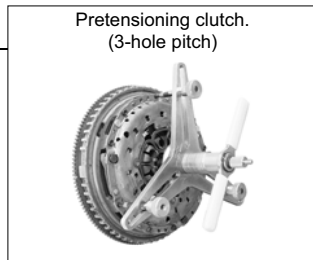
KL-0500-401



KL-0500-402

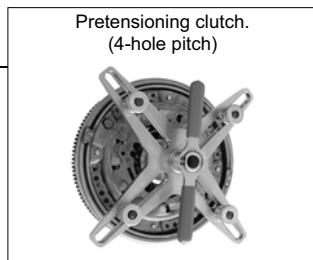
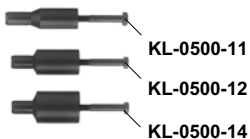


KL-0500-403

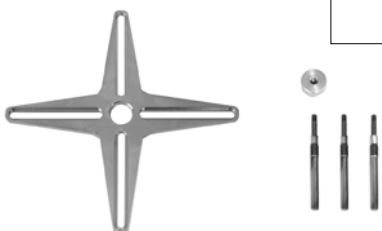


KL-0500-404

BMW



KL-0500-4014



KL-0500-401 Clutch Compressor

On these self-adjusting clutches it is essential for the pressure plate to be pretensioned with clutch compressor **KL-0500-401** before removal or installation.

Avoiding clutch distortion (clutch judder when driving off).

KL-0500-402 Clutch Aligner

Clutch Aligner **KL-0500-402** locates the clutch plate centrally in relation to the guide bearing or pre-tensioning device before it is installed.

Clamping cone :

Size. 1 15-22 mm; Size. 2 22-28 mm

Mandrel-Ø:

12 mm; 14 mm; 15 mm; 16 mm; 17 mm; 18 mm; 19 mm

KL-0500-403 Resetting Tool

The adjuster ring in the clutch pressure plate can be turned back with resetting tool **KL-0500-403** together with clutch compressor **KL-0500-401**.

KL-0500-404 Clutch Mandrel Set

Suitable for **BMW** vehicles.

To centre the clutch plate before initial or renewed installation of the pretensioned SAC-Clutch pressure plate.

Specification:

Part-No.	Description	Qty.
KL-0500-11	Clutch Mandrel Ø15/23 mm	1
KL-0500-12	Clutch Mandrel Ø15/28 mm	1
KL-0500-14	Clutch Mandrel Ø15/34 mm	1

KL-0500-4014 Supplement Kit (4 hole pitch) for KL-0500-40 K

Required for pretensioning the clutch pressure plate when removing and installing SAC-clutches with 4 hole pitch.

KL-0500-3



KL-0500-3 SAC Clutch Tool Set

(German Utility Model)

Application: **BMW and Volvo.**

Guarantees a quick, clean and safe mounting of Self-Adjusting-Clutches.

BMW: E38 (7-series), E39 (5-series), E46 (3-series)

Volvo: C70 2,4 20V Turbo, S70 2,3 Turbo, S70 2,5 20V Turbo, S70 2,5 TDI, V70 2,3 Turbo, V70 2,5 20V Turbo, V70 2,5 TDI

Weight:..... 2,5 kg

Part-No.	Description	Qty.
KL-0500-3	Clutch Tool Set	1
<i>consists of:</i>		
KL-0500-10	Clutch Compressor	1
KL-0500-11	Clutch Aligner Drift Ø 23 mm	1
KL-0500-12	Clutch Aligner Drift Ø 28 mm	1
KL-0500-13	Clutch Aligner	1
KL-0500-19	Clutch Return Tool	1

KL-0500-1



BMW, Volvo



Clutch Pressure Plate with Clamp

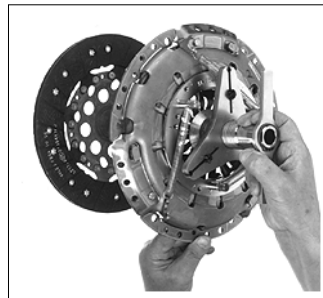
KL-0500-1 Clutch Aligner Set

Application for SAC-Clutches (Self-Adjusting-Clutch) on **BMW and Volvo.**

On self-adjusting clutches it is essential for the pressure plate to be pretensioned with Clutch Compressor **KL-0500-10** before removal or installation.

Part No.	Description
KL-0500-1	Clutch Aligner Set
<i>consists of:</i>	
KL-0500-10	Clutch Compressor
KL-0500-11	Clutch Mandrel Ø 23 mm (BMW)
KL-0500-12	Clutch Mandrel Ø 28 mm (BMW)

KL-0500-10



KL-0500-10 Clutch Compressor

It is possible to compress the SAC-Clutch before assembly which avoids the risk of damage. It is essential that the clutch is set to the „new“ position by use of the **KL-0500-19** Clutch Return Tool.

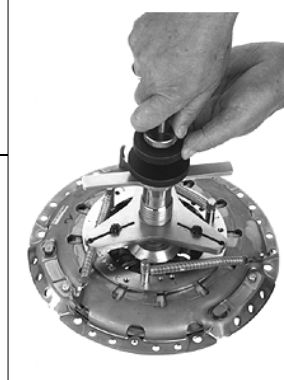
(Very important before assembly)

Weight:..... 1,4 kg

KL-0500-11 / KL-0500-12



BMW, Volvo



KL-0500-11 Clutch Aligner Mandrel ø 23 mm

For **BMW** vehicles: To centre the clutch plate before mounting the compressed SAC-Clutch. Also for centering new clutches.

For hub -Ø:23 mm Weight:..... 0,21 kg

KL-0500-13



KL-0500-12 Clutch Aligner Mandrel ø 28 mm

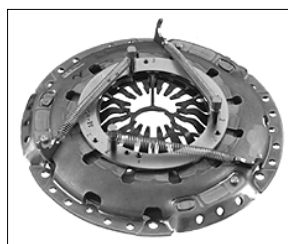
As **KL-0500-11**, but:

For hub -Ø:28 mm Weight:..... 0,28 kg

KL-0500-13 Clutch Aligner

Before assembly, the clutch plate can be centered to the compressed SAC-Clutch by the clutch aligner **KL-0500-13**. Eliminates the need to center over the pilot bearing. Weight:..... 0,27 kg

KL-0500-19



KL-0500-19 Clutch Return Tool

Before compressing the SAC-Clutch with tool **KL-0500-10** the Return Tool **KL-0500-19** is placed on the clutch. During the compressing process there is an automatic return of the cover plate to the „new“ position. Weight:..... 0,42 kg

KL-0069



Universal



KL-0069 Clutch Aligner (Universal)

For Clutch-Hub-Ø: 15 - 28 mm.

The mandrel expands in a conical form so that an angle can exist between the axis of the tool body and the crankshaft axis. As a result, the clutch friction plate can **ONLY** be aligned against the cover-plate.

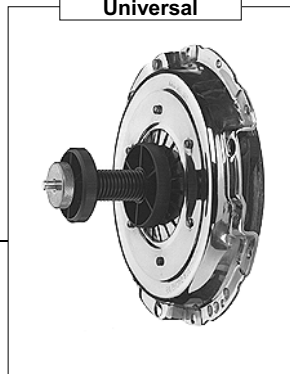
KL-0069-K Clutch Aligner (Universal)

As **KL-0069** but supplied in plastic storage case **KL-0069-5030**.

KL-0069-5



Universal



KL-0069-5 Clutch Aligner

(Universal) With centering sleeves and plastic storage case.

For Clutch-Hub-Ø: 15 - 28 mm.

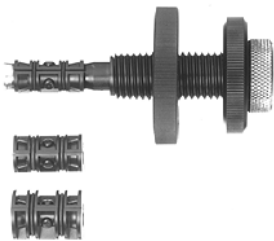
As a result of **parallel expansion technique** it is possible to align the clutch plate to the pilot bearing in the crankshaft flywheel.

Clutch assemblies no longer equipped with a pilot bearing in the crankshaft can be aligned with the cover plate using the new parallel expansion technique.

Advantage:

The expanding segments expand in the same axis of both the tool body and the crankshaft, so that alignment of the clutch plate is possible relative to either flywheel or cover plate.

KL-0069-55



KL-0069-55 Clutch Aligner

(Universal); For Clutch-Hub-Ø: 15 - 28 mm.

As **KL-0069-5** but without Pilots and without plastic storage case.

Accessories:

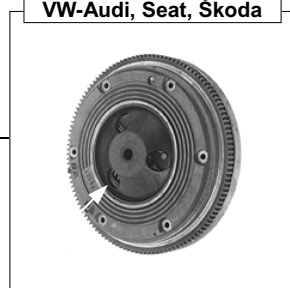
KL-0069-5010 Pilot Set

KL-0069-5030 Plastic Storage Case (empty)

KL-0201



VW-Audi, Seat, Škoda



KL-0201 Clutch Aligner

Allows the clutch disc to be aligned to the flywheel.

Application: VW Golf 1,5 - 1,8 litre.

KL-0202



KL-0202 Clutch Aligner

As **KL-0201** but for **VW engines with 16 valves.**

KL-0069-7



KL-0069-7 Clutch Aligner

Applicable for trucks and small lorries with a hub-Ø of 24 - 36 mm.

Part No.	Description
KL-0069-7	Clutch Aligner Tool for Transporter
<i>consists of:</i>	
KL-0069-700	Sleeves (Ø 15, 16, 17, 18, 19, 20 mm)
KL-0069-710	Clutch Aligner Ø 24-36 mm

KL-0069-7 R



KL-0069-7 R Clutch Aligner

Suitable for Transporter and small lorries with hub-Ø of 23 - 35 mm, especially Renault.

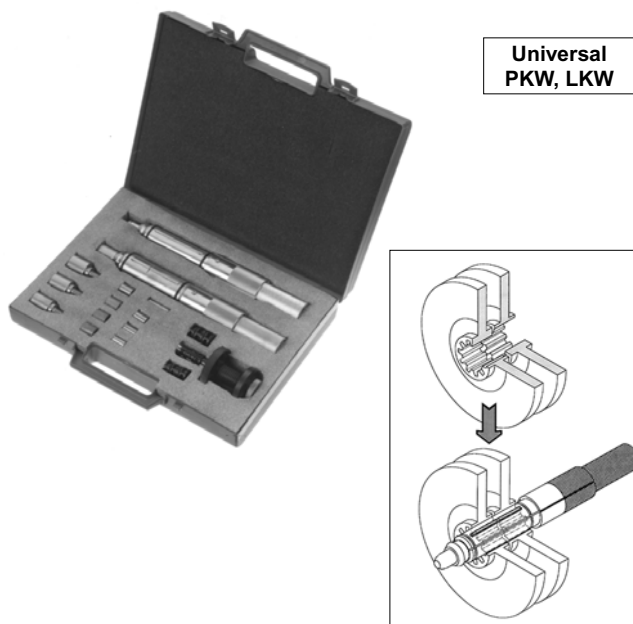
Part No.	Description
KL-0069-7 R	Clutch Aligner Tool (Renault)
<i>consists of:</i>	
KL-0069-700	Sleeves (Ø 15, 16, 17, 18, 19, 20 mm)
KL-0069-710 R	Clutch Aligner Ø 23-35 mm

KL-0069-60 K Clutch Aligner Set

For vehicles with single and double disc clutches

Part No.	Description
KL-0069-60 K	Clutch Aligner Set
<i>consists of:</i>	
KL-0069-55	Clutch Aligner for Vehicles
KL-0069-5010	Aligner Case Set (Ø 12, 14, 15, 16, 17, 18, 19 mm)
KL-0069-6	Clutch Aligner for Trucks
KL-0069-6090	Plastic Storage Case (empty)

KL-0069-60 K



Universal
PKW, LKW

• KL-0069-55 + KL-0069-5010 (KL-0069-5)

Universal Clutch Aligner Set with Aligner Cases.

For hub-Ø: 15 - 28 mm

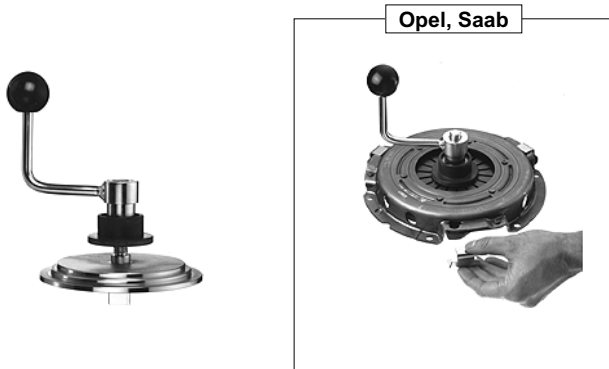
Because of the parallel expanding technology it is possible to centre the clutch plate to the clutch pressure plate or to the flywheel.

• KL-0069-6 Clutch Aligner Tool for Trucks

For trucks with single or double disc clutches (universal)

This tool set allows the correct alignment of **single or double disc** clutches of trucks and tractors to the engine. Mandrel No. 1 is applicable on interior clutch hub-Ø from 36 - 45 mm. Mandrel No. 2 is applicable on interior clutch hub-Ø 42 - 52 mm inside. The clutch aligner kit contains centering sleeves with Ø 20, 25, 27 and 30 mm.

KL-0043-53



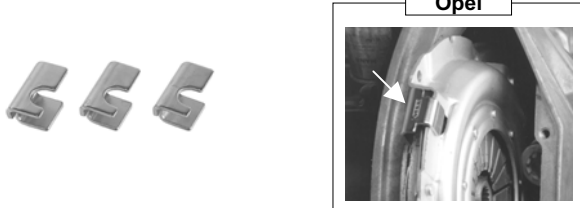
KL-0043-53 Clutch Compressor

For Clutch Pressure Plate on **Opel** and **Saab** passenger cars.
The tool consists of a steel plate with a number of concentric steps which allow the pressure plate to be accurately centered. A compression spindle complete with axial bearing and pressure adaptor is mounted through the centre of the steel plate to apply compression forces without risk of distortion of the spring-fingers.

Advantage: No distortion of the Pressure Plate.

Clutch Pressure Plates should never be compressed in a normal bench-vise or under a Hydraulic Press.

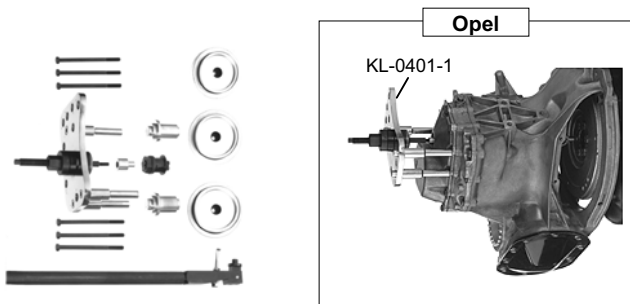
KL-0401-2010



KL-0401-2010 Clamps (3 pcs.)

To fix the pressed Clutch Pressure Plate on **Opel** vehicles .

KL-0410-1

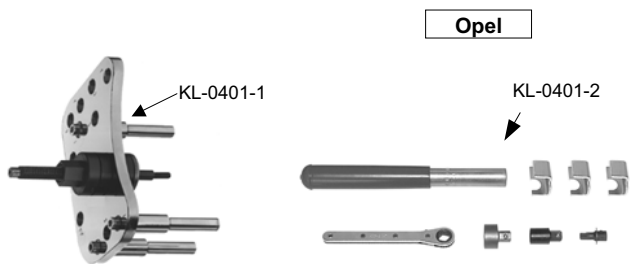


KL-0410-1 Clutch Tool Set for Opel

consists of:

Part No.	Description
KL-0410-1	Clutch tool set for Opel
consists of:	
KL-0401-1	Clutch tool
KL-0402	Pressure adaptor for replacing the spigot bearing
KL-0403	Pressure & guide disc No. 1 (Outer-Ø: 102 mm, inner-Ø: 82 mm)
KL-0404	Pressure & guide disc No. 2 (Outer-Ø: 110 mm, inner-Ø: 88,2 mm)
KL-0405	Pressure & guide disc No. 3 (Outer-Ø: 110 mm, inner-Ø: 91,7 mm)
KL-0406	Crankshaft oil-seal extractor
KL-0407-1	Clutch guide bearing puller
KL-0408	Special drift
KL-0409	Special drift

KL-0401-3



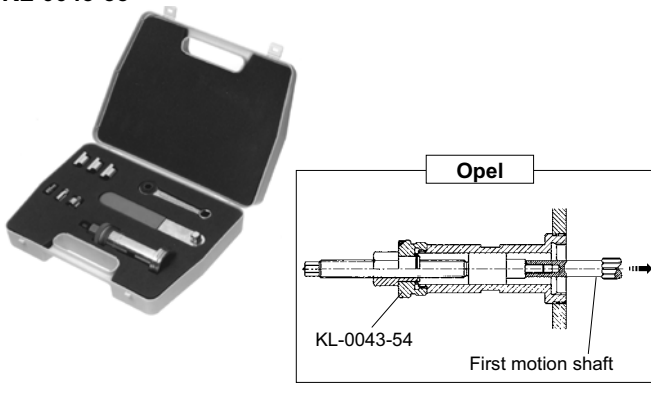
KL-0401-3 Clutch Tool Set for Opel/Vauxhall

For all front wheel drive GM Opel cars.

This tool allows the first motion shaft to be withdrawn, and the spigot bearing and crankshaft oil-seal to be replaced. The tool functions whether the first motion shaft is central or offset in the threaded access hole, or even if there is no hole provided in the gearbox housing - as on the latest models.

Part No.	Description		
KL-0401-3	Clutch Tool Set		
consists of:			
KL-0401-1	Clutch Tool Set		
KL-0401-2	Tool Set		
Part No. Description			
KL-0401-2	Tool Set		
consists of:			
KL-0401-2001	Ratched lever	KL-0401-2004	Hex. insert 17
KL-0401-2002	Operating lever	KL-0401-2005	Multi tooth nut
KL-0401-2003	Hex. insert 11	KL-0401-2010	Clamps (3 pcs.)

KL-0043-55



KL-0043-55 Clutch Exchange Tool

For **GM Opel** (4 and 5 speed front wheel drive).

This tool allows the first motion shaft to be withdrawn.

Part No.	Description		
KL-0043-55	Clutch Exchange Tool		
consists of:			
KL-0043-54	Clutch exchange tool		
KL-0401-2	Tool Set		
KL-0043-5415	Plastic case		
Part No. Description			
KL-0401-2	Tool Set		
consists of:			
KL-0401-2001	Ratched lever	KL-0401-2004	Hex. insert 17
KL-0401-2002	Operating lever	KL-0401-2005	Multi tooth nut
KL-0401-2003	Hex. insert 11	KL-0401-2010	Clamps (3 pcs.)

KL-0416-4



Opel/Vauxhall
Saab



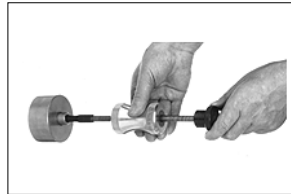
KL-0416-4 Clutch Assembly Ring (Plastic)

For range: \varnothing 110 - 140 mm

Assembly aid to keep the diaphragm spring compressed - used in conjunction with **KL-0043-53**.

Application: Opel/Vauxhall and Saab passenger cars.

KL-0043-31



KL-0043-31 Bearing Extractor Set (Universal)

With Plastic case. For pilot bearings, generator bearings, etc.

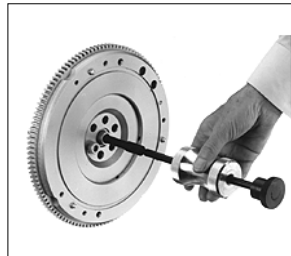
With range from 10 - 20 mm diameter.

Application: For passenger cars

Specification:

Part No.	Description	Part No.	Description
KL-0043-3101	Spreader 5 mm	KL-0043-3109	Jaws 15 mm
KL-0043-3102	Spreader 6 mm	KL-0043-3110	Jaws 17 mm
KL-0049-1013	Slide Weight	KL-0043-3111	Jaws 20 mm
KL-0043-3107	Jaws 10 mm	KL-0043-3115	Plastic Case (empty)
KL-0043-3108	Jaws 12 mm		

KL-0043-32



KL-0043-32 Bearing Extractor Set (Universal)

(With Plastic case). For pilot bearings, generator bearings, etc.

With range from 10 - 30 mm diameter.

Application: For passenger cars and trucks (lorries)

The collets are manufactured from a special high grade steel to ensure proper functioning of the tool.

Specification:

Part No.	Description	Part No.	Description
KL-0043-3101	Spreader 5 mm	KL-0043-3110	Jaws 17 mm
KL-0043-3102	Spreader 6 mm	KL-0043-3111	Jaws 20 mm
KL-0049-1013	Slide Weight	KL-0043-3112	Jaws 25 mm
KL-0043-3107	Jaws 10 mm	KL-0043-3113	Jaws 27 mm
KL-0043-3108	Jaws 12 mm	KL-0043-3114	Jaws 30 mm
KL-0043-3109	Jaws 15 mm	KL-0043-3115	Plastic Case (empty)

KL-0175-60



KL-0175-60 Pilot Bearing Extractor Set

For removal of Pilot Bearings, Bushes etc. from blind housings.

Specification:

Part-No.	Description	for \varnothing [mm]	Thread
KL-0175-300	Support	-	-
KL-0175-601	Jaws	8-12	M10
KL-0175-602	Jaws	12-15	M10
KL-0175-603	Jaws	15-19	M10
KL-0175-604	Jaws	19-25	M10
KL-0175-605	Jaws	25-30	M10
KL-0175-606	Jaws	30-35	M10
KL-0175-6090	Metal Case	-	-

KL-0203-1



KL-0203-1 Clutch Cable Clamp

Applicable on **VW Golf II, III, etc.**

For securing the self-adjusting clutch cable when exchanging the clutch. If omitted, the clutch cable has to be completely renewed.

KL-0110

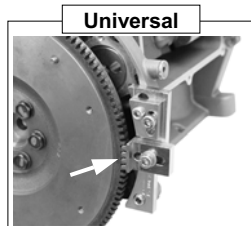
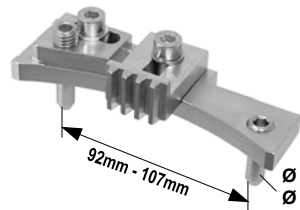


KL-0110 Flywheel Locking Tool (Universal)

Necessary for dismantling or re-assembling flywheels, clutch pressure plates and belt pulley.

Length: 250 mm
Weight: 0,5 kg

KL-0182-10



KL-0182-10 Flywheel Locking Tool adjustable (German Utility Model)

To lock the flywheel when the gearbox is dismantled.

Universal application. The tool can be adjusted axially and radially and can be used almost universally by screwing in different stud bolts.

Accessories: KL-0182-1017 - Bolt Ø 10 mm x 35 mm
KL-0182-1018 - Bolt Ø 10 mm x 45 mm

KL-0232-1 Polygon Socket xZN M8

For loosening the screws at the drive shaft quick and easy from outside

→ Increased job time saving.

Not permitted for the use of impact guns.

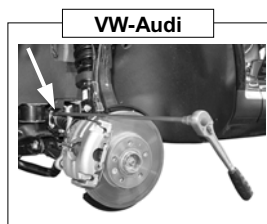
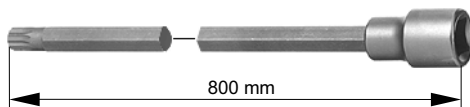
Suitable for **VW-Audi, etc.**

Length: 800 mm
Drive: 1/2" □

KL-0232-1



Extra long



KL-0232-2 Polygon Socket xZN M10 (not. ill.)

Application as **KL-0232-1.**

Especially for VW Golf IV etc.

Length: 800 mm
Drive: 1/2" □

KL-0232-3 Polygon Socket xZN M12 (not. ill.)

Application as **KL-0232-1.**

Especially for VW T4, Touareg etc.

Length: 800 mm
Drive: 1/2" □

KL-0232-4 Polygon Socket xZN M14 (not. ill.)

Application as **KL-0232-1.**

Especially for VW T4, Touareg etc.

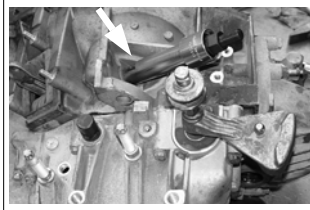
Length: 800 mm
Drive: 1/2" □

KL-1600-10

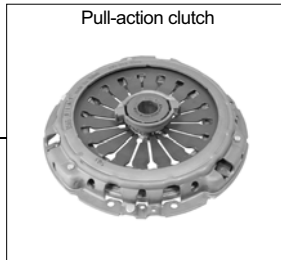
Fiat



Clutch shaft extraction



Pull-action clutch

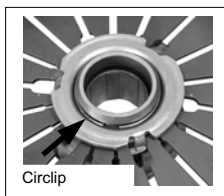
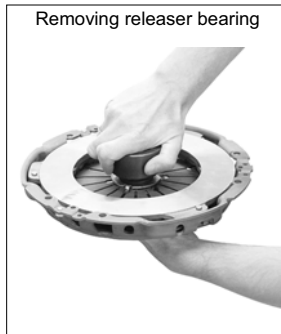


KL-1600-11

Fiat



Removing releser bearing



Circlip

KL-0043-32

Universal



KL-1600-10 Puller for Fiat Ducato releser shaft

For use on Fiat Ducato 1994 onwards with pull-action clutch.

For removal of the clutch releser shaft.

This tool is needed when removing the gearbox, for example in order to change the clutch or for gearbox repairs.

KL-1600-11 Releser bearing removal pin

For use on Fiat Ducato 1994 onwards with pull-action clutch.

To remove the releser bearing from the pressure plate, the Circlip must be pretensioned with removal pin KL-1600-11.

KL-0043-32 Bearing Extractor Set (Universal)

(With Plastic case). For pilot bearings, generator bearings, etc.

With range from 10 - 30 mm diameter.

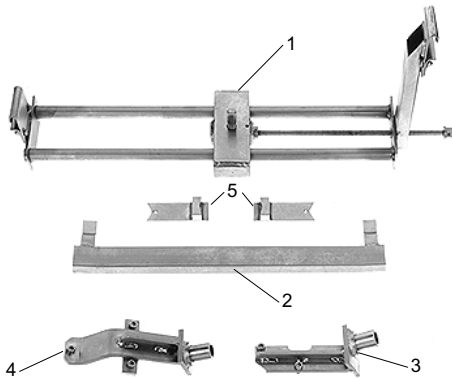
Application: For passenger cars and trucks (lorries)

The collets are manufactured from a special high grade steel to ensure proper functioning of the tool.

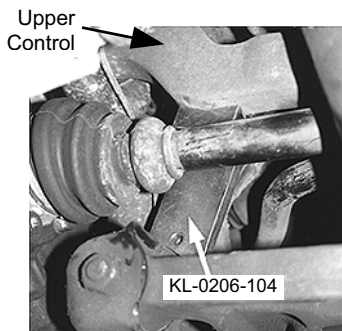
consists of:

Part No.	Description
KL-0043-3101	Spreader 5 mm
KL-0043-3102	Spreader 6 mm
KL-0043-3103	Slide Weight
KL-0043-3107	Jaws 10 mm
KL-0043-3108	Jaws 12 mm
KL-0043-3109	Jaws 15 mm
KL-0043-3110	Jaws 17 mm
KL-0043-3111	Jaws 20 mm
KL-0043-3112	Jaws 25 mm
KL-0043-3113	Jaws 27 mm
KL-0043-3114	Jaws 30 mm
KL-0043-3115	Plastic Case (empty)

KL-0206-1

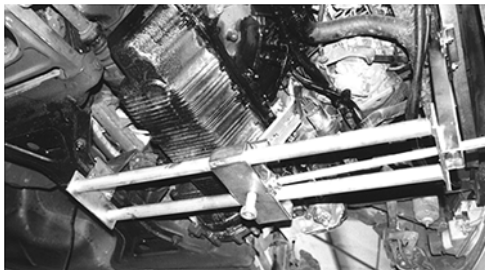


Support of the upper wishbone with retaining wedge



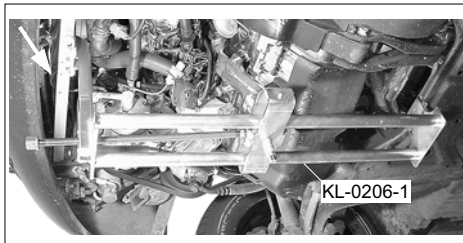
VW T4

Engine lifter KL-0206-1, mounted



KL-0206-105

VW T4



KL-0284-22



KL-0206-1 Engine Lifter VW T4

For lifting the engine on VW Transporter T4 up to '95.

For the removal and installation of clutch and gearbox on VW T4 it is essential to support the engine with engine lifter **KL-0206-1** and after undoing all mounting bolts, loosening the exhaust flange and removal of all connections the engine must be lifted and pushed to the right front side until the pulley of the crankshaft gets almost in contact with the frame. Only then it is possible to remove the gearbox or exchange the clutch.

Advantages:

- Easy installation of the engine lifter on the vehicle.
- Support of the upper wishbone with retaining wedges for removal of the drive shaft.
- Support and correct positioning of the engine in every wanted position.
- Easy removal and installation of gearbox and clutch.
- Applicable for 4 and 5 cylinder engines.
- Safety fixture avoids caught in fingers in the tools support.

Notes and Warnings:

- Removal and installation of gearbox and clutch without engine lifter **KL-0206-1** is a dangerous procedure.
- The clutch centre-plate can be aligned to the pilot bearing or against the pressure-plate with the Tool **KL-0069-5**.

Specification:

Pos.	Part No.	Description	Qty.
	KL-0206-1	Engine Lifter VW T4	1
	<i>consists of:</i>		
1	KL-0206-100	Hub frame	1
2	KL-0206-101	Support	1
3	KL-0206-102	Receiver for 4 cylinder engines	1
4	KL-0206-103	Receiver for 5 cylinder engines	1
5	KL-0206-104	Set of Retaining Wedges (2 pieces)	1

Technical Data:

Length: 870 mm
 Height: 365 mm
 Width: 230 mm
 Weight: 21,2 kg

KL-0206-105 Support VW T4 1995 onwards

Suitable for: VW Transporter T4 '95 onwards (extended bodywork)

To lift and pull forward the Engine/Gearbox assembly in conjunction with the Lifting Equipment **KL-0206-1**.

KL-0284-22 Exhaust Spring Compressor (German Utility Model)

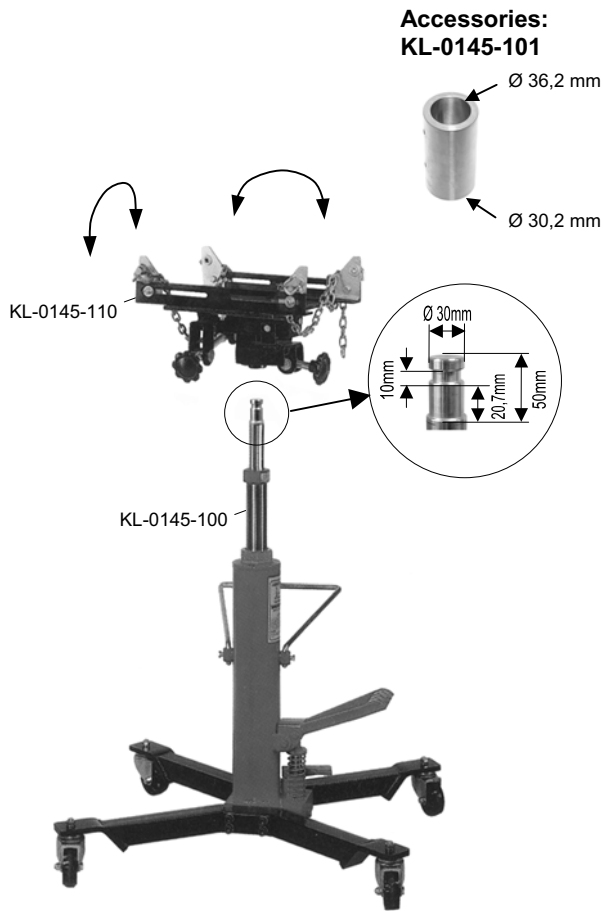
For removal and replacement of steel clamps on exhaust manifolds on **VW-Transporter T4 with 5-cylinder diesel engines**.

Advantage:

Easy and quick installation of steel clamps within 3 minutes. Further Compressors for steel clamps on exhaust manifolds see chapter 6.8 Exhaust System.

Note: Polygon Sockets to loose the drive shaft fastening screws from the differential flange see catalogue, page **7-09**.

KL-0145-10



Weight:	69,5 kg
Load max.	500 kg

KL-0145-30



KL-0145-10 Transmission Jack

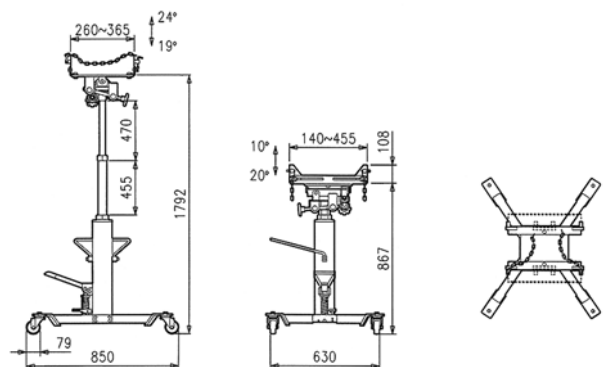
Consists of

- KL-0145-100 Hydraulic Transmissions Jack**
- KL-0145-110 Adjustable Universal Table**

Hydraulic Telescopic Transmission Jack for removal and replacement of assemblies e.g. Motor, Gearbox, Rear Axle, Differential etc. on Passenger Cars and Transporters.

- Adjustable Universal Table with adjustable corner holders and safety-chains for optimal fine adjustment of position.
- Simple and accurate raising and lowering by foot-pedal.
- Stable and easy to move due to large caster-wheels.

Technical Data:



Accessories:

KL-0145-101 Carrier Adaptor VW-Audi

To use the various VW-Audi engine and transmission holders the **KL-0145-101** Carrier Adaptor is required.

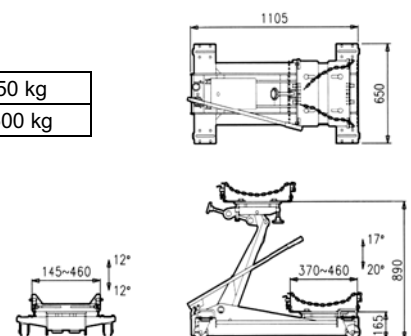
KL-0145-30 Transmission Lift

Hydraulic Transmission Lift to allow removal and replacement of assemblies such as: Engines, Gearboxes, Rear Axles, etc.

- Also useful for changing Clutches on Tractors.
- Adjustable Universal Table with adjustable Corner Pieces and Safety-Chains to allow optimal positioning of the transmission during re-assembly.
- Good stability coupled with easy mobility thanks to large diameter castor wheels.
- Pump handle rotates through 360 degrees to allow easy and precise positioning during lifting.

Technical Data:

Weight:	150 kg
Load max.	1500 kg

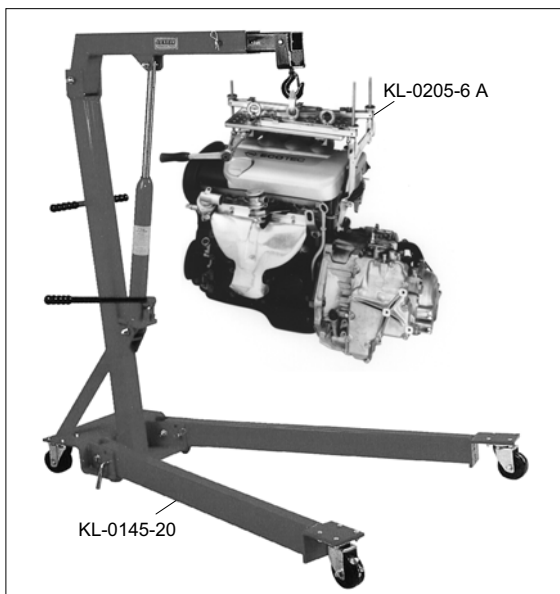


KL-0145-20



Weight:	82 kg
Load max.	1000 kg

KL-0205-6 A

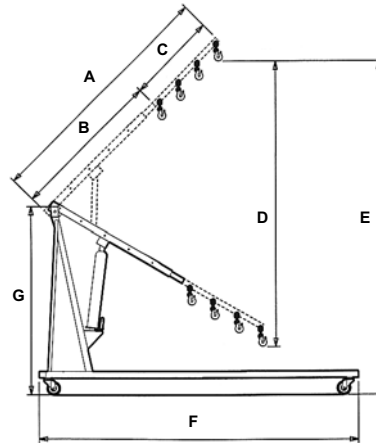


KL-0145-20 Engine Crane

Hydraulic Engine Crane for removal and replacement of Engines, gearboxes, etc.

- Folds ⇒ easy to store when not in use.
- Stable and easy to move due to large caster wheels.
- Lift arm adjusts to 4 lengths.

Technical Data:



A:	1150 mm	E:	1800 mm
B:	870 mm	F:	1487 mm
C:	280 mm	G:	1575 mm
D:	1760 mm		

KL-0205-6 A Universal Lifting Bridge

(Patented)

The **KL-0205-6 A** Lifting Bridge in combination with the **KL-0145-20** Engine crane allows the following operations to be easily and safely performed: removal and replacement of Engine, Gearbox, Differential, Clutch, Engine Mountings, Sub-frame Mountings.

Dimensions: 400 × 200 × 12 mm Weight:..... 13,4 kg

Advantages:

- Secure support of the engine no matter what location of the lifting points.
- Firm, locked connections between engine and Lifting Bridge by 3 lifting spindles and 2 distance spindles.
- The multi-hole plate equipped with 3 adjustable support arms offers the user the ability to achieve a correct connection with a wide variety of engines fitted with various lifting points.
- Additional safety is provided by the safety spindle between Lifting Bridge and Motor Bridge.
- The 2 adjustable distance spindles under the multi-hole plate allows control of the centre of gravity of the suspended engine, which in turn ensures exact positioning of the engine either during lifting or lowering.

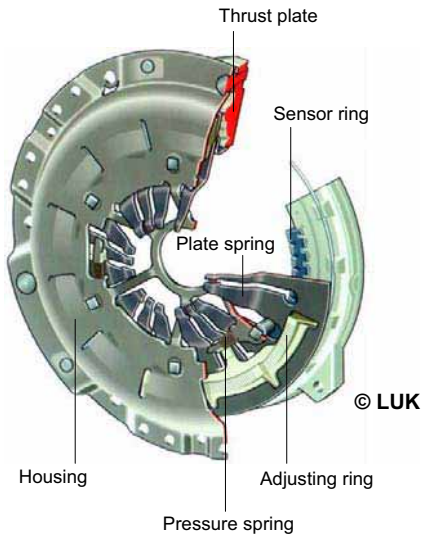
Note:

Without the **KL-0205-6 A** Lifting Bridge, precise positioning of the engine during lifting and lowering will not be possible!

SAC-Clutch

“The new and unknown in the garage“

Assembly:



Advantages:

- constantly low pull-off force during the whole lifetime
- higher drive comfort during the whole lifetime
- higher wear reserve and longer lifetime due to automatic wear compensation
- restriction of the release bearing guide by plate spring stop
- no servomechanism
- user-friendly pull-off systems
- shorter pedal stroke
- same pedal force on the whole range of motors
- new possibilities to reduce clutch diameter
- smaller release bearing guide during lifetime

The necessary Tool:

KL-0500-40 K or rather KL-0500-40 KA



Advantages:

- Designed for quick, safe and precise operation.
- Easy removal and installation of new and already installed components.
- Clutch plate pretensioning during removal and installation. (important to avoid excessive tightness of the clutch)
- Clutch disk centering in the pilot bearing or in the thrust plate.
- Re-assembly of the adjusting ring by using the proper tool **KL-0500-403**.

Mount tool.



Pretense clutch.



Note:
SAC-Tool Set
KL-0500-40 K / KL-0500-40 KA
 see page 7-02 / 7-03