

Packing List

**04-11 Mercedes SLK Convertible Hydraulic Cylinder Repair
Kit & More...R171**

Covers Ebay Listing #'s

281920871769

- 1 x Set (1) Nitrile Rubber O-ring
- 1 x Pick Set
- 1 x 10ML Syringe
- 1 x Length Clear PVC Tube
- 1 x 1 Liter Of Mercedes Benz or MB approved Hydraulic Oil
#000-989-91-03-10
- 1 x Set Of Illustrated Multipage Guidelines

Mercedes SLK..... R171.... Roof Locking Hydraulic Cylinder Repair Seal for Hardtop Convertible



DISCLAIMER

**THIS IS IN NO WAY MEANT AS AN INSTRUCTIONAL MANUAL, IT'S
ONLY A GUIDELINE OF HOW I PERFORMED THE TASK IN
QUESTION. I HOLD NO RESPONSIBILITY WHATSOEVER FOR
MISUSE, MISINTERPRETATION ETC. I DO NOT GUARANTEE THIS
WILL WORK OR SOLVE THE PROBLEM, BUT IT CERTAINLY DID FOR
ME AND MANY LIKE ME**

"GOOGLE IT AND SEE FOR YOURSELF"

Fits these vehicles that are built on the R171 Chassis

- | | |
|----------------------|-------------|
| • SLK 200 KOMPRESSOR | 2004 - 2008 |
| • SLK 280 | 2005 - 2009 |
| • SLK 300 | 2009 |
| • SLK 350 | 2004 - 2008 |
| • SLK 55 AMG | 2004 - 2008 |

What you should have received

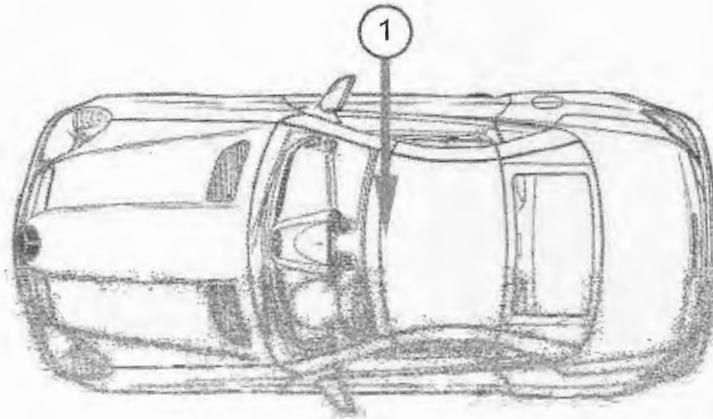
- 1 x General Guidelines
- 1 x Black Nitrile Rubber O Ring
- 1 x Set Of Picks



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R171 SLK-CLASS 2004-2011
VARIO ROOF
FRONT LOCK CYLINDER



| NUMBER | DESCRIPTION | PART NUMBER |
|--------|---------------------|-------------|
| 1 | FRONT LOCK CYLINDER | 1718000072 |



Additional tools you will require

- Some form of securing/clamping device to hold the actuator in while performing the tasks like a bench vice removed from the bench or even a Black and Decker workmate style bench. It has to be portable in that it needs to be located as close to the passengers in USA (or drivers side in some parts of Europe) door/window.

I removed my vice from my work bench and sat it on a stool right next to the closed car door with the window fully down, worked perfect

- Fully charged battery operated or electric drill
- 1/8" drill bit, get a spare too just in case you break one and make sure they are sharp, in fact buy a pair of new ones (very inexpensive)
- Socket set that includes an extension
- 8mm socket
- T30 torx bit
- 1/4" or 6mm Hex head socket drive for torx bit unless you have a set of these which has a T30 torx head in the set

- PICK set (Included)
- Large can or WD40
- PVC Electrical tape
- Small long needle nose pliers
- Side cutters
- Phillips screwdriver
- Hammer



Procedure

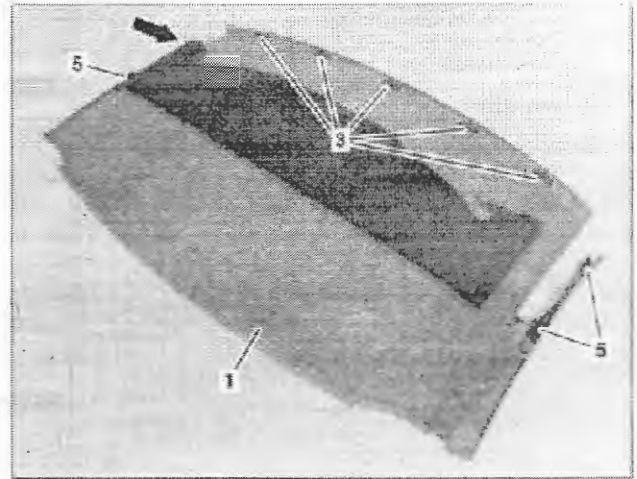
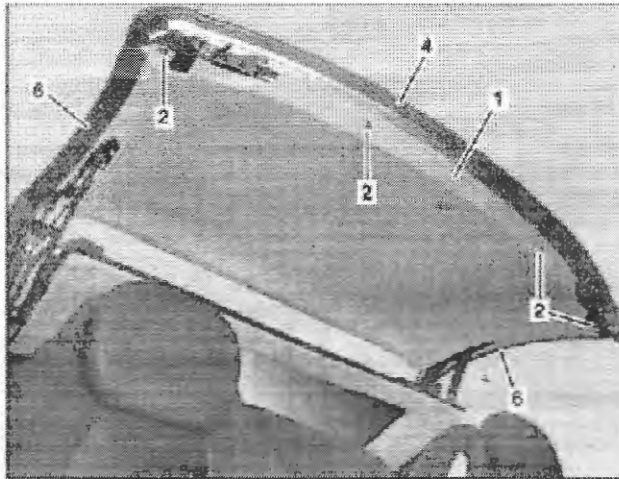
Removal of the Headliner

AR68.30-P-4350V






Remove/install paneling at front of Vario-roof

26.11.03

MODEL 171.4



1. Headliner 2. Posidrive/Phillips head bolts 3. Clips 4. Front part of vario roof
5. Catch lugs 6. Gasket

| | Remove/Install | | |
|--|--|---|-------------------------------------|
|  Danger! | Risk of injury from pinching or squeezing when working on partially open Vario roof (stop mode) or in its closing area as a result of the Vario roof suddenly collapsing | Secure Vario roof with a suitable special tool | AS77.50-Z-1001-01A |
| 1 | Moving Vario roof into intermediate position and securing |  Position C-pillar approx. 80° | AR77.50-P-1001-01V *230585045300 |
| 2 | Unscrew bolts (2) | | |
| 3 | Unclip headliner (1) from Vario roof front section (4) in area of clips (3) |  Carefully unclip headliner (1), otherwise clips (3) can break | *W1H58.30-Z-1004-19A |
| 4 | Unclip headliner (1) from catch lugs (5) and concealed catch lug (arrow) from Vario roof front section (4) using mounting wedge |  Installation: Ensure that catch lugs (5, arrow) are seated properly in associated retaining clips on Vario roof front section (4) | *110585035900 |
| 5 | Remove headliner (1) |  Installation: Position left and right gasket (6) on headliner (1) with clean long wedge | *110585035900 |
| 6 | Install in the reverse order | | |

The above are excerpts from the shop manual (page included)

Once the headliner is out of the way, my advice would be to snap lots of pictures of the actual actuator, mounting bolts and hydraulic hose routing, so that when you reassemble you have a good guideline of everything.

Removal of the Actuator

First setup the vice or work mate type bench alongside the closed door of the car

There are 3 Torx30 screws holding the actuator to the black mounting plate, loosen then off. The screws are secured to the plate so they won't fall out, so don't worry about dropping them.

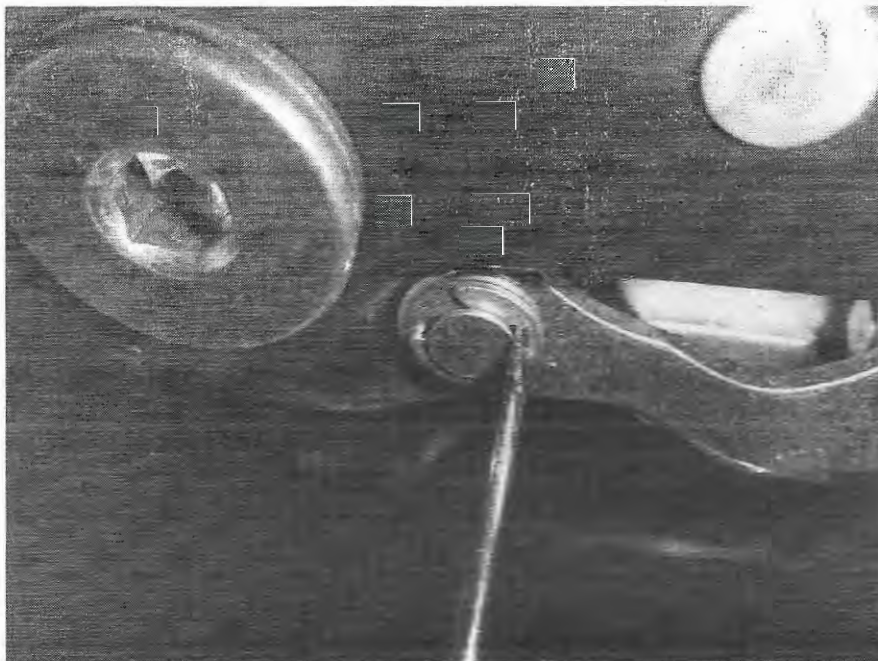


The black mounting plate should now drop somewhat to allow access and maneuverability

There are 2 E-clips that hold the actuator to the locking arms and black mounting plate



Use a small flat bladed screwdriver to remove the E-clips (be sure not to let them spring off and lose them)



The 2 studs that the E clips secured in place, push them up and out. Honestly this was awkward, the studs are tight in the respective holes a little perseverance and wiggling will work. But remember when putting back, this actually took most of the time up. Use a drill bit you may have handy of a similar diameter to align the holes all up when reinstalling.

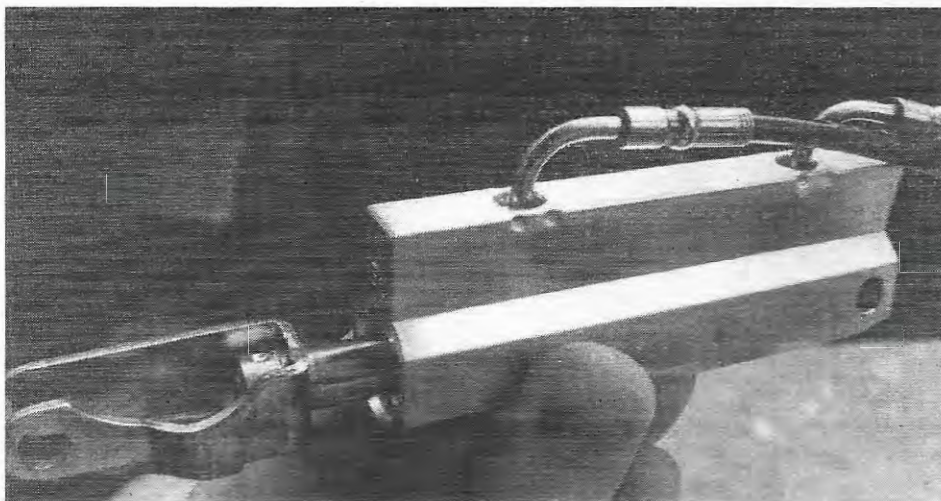
Remember they are different lengths and where each one came from.



There's a small dimple in the black mounting plate that seats the actuator. Wiggle the actuator a bit and it will release from it (it's just a seating point)



The hydraulic hoses that enter the body of the actuator are sealed permanent fixtures and you can't in any way disconnect them so don't try)



Once the actuator is all free now remove all the tie wraps/zip ties along the routing of the 2 hydraulic hoses as far as you can go. I was able to remove all the way to the passenger vertical door panel where everything disappears into the back of the car

Make sure you took photos of the routing before you snip the ties

There may be some residual hydraulic fluid around the leak so I would suggest wrap it in a rag before moving it out of the car. Gently feed the actuator and hoses through the open window. You should have already setup your vice/securing clamp directly outside the door.

You should have enough freedom of hose etc. to lay the actuator on the vice (around 3 feet or so)

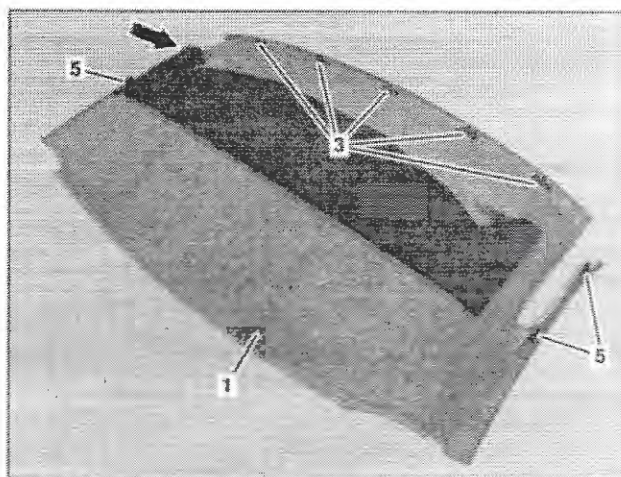
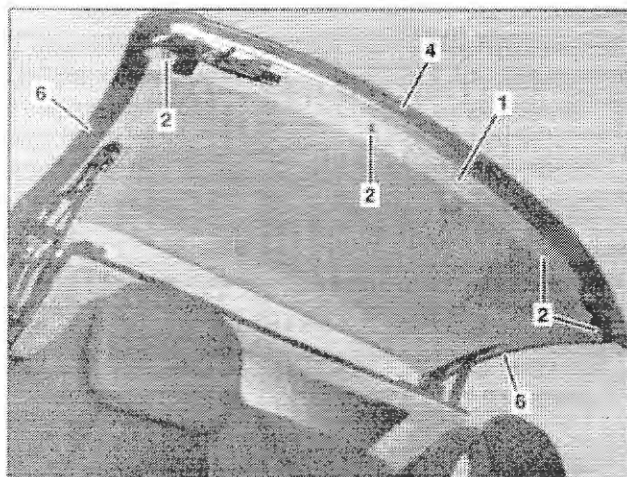
The Nice Part

See attached pages

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"GOOGLE IT AND SEE FOR YOURSELF"



P68.30-2906-08

- | | | |
|-------------|----------------------------|--------------|
| 1 Headliner | 3 Clip | 5 Catch lugs |
| 2 Bolts | 4 Front part of Vario roof | 6 Gasket |

| | Remove/Install | | |
|----------------|---|---|---------------------|
| Danger! | Risk of injury from pinching or squeezing when working on partially open Vario roof (stop mode) or in its closing area as a result of the Vario roof suddenly collapsing | Secure Vario roof with a suitable special tool. | AS77.50-Z-0001-01A |
| 1 | Moving Vario roof into intermediate position and securing | Position C-pillar approx. 90° | AR77.50-P-3000-01V |
| | | | *230589046300 |
| 2 | Unscrew bolts (2) | | |
| 3 | Unclip headliner (1) from Vario roof front section (4): in area of clips (3) | Carefully unclip headliner (1), otherwise clips (3) can break | *WH58.30-Z-1004-19A |
| 4 | Unclip headliner (1) from catch lugs (5) and concealed catch lug (arrow) from Vario roof front section (4) using mounting wedge. | Installation: Ensure that catch lugs (5, arrow) are seated properly in associated retaining clips on Vario roof front section (4). | *110589035900 |
| 5 | Remove headliner (1) | Installation: Position left and right gasket (6) on headliner (1) with clean long wedge | *115589035900 |
| 6 | Install in the reverse order | | |



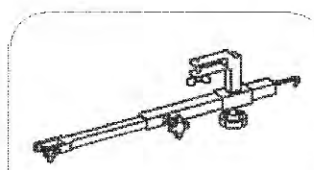
110 589 03 59 00

Mounting wedge



115 589 03 59 00

Long wedge



230 589 04 63 00

Support

Commercially available tools

| Number | Designation |
|---------------------|--------------------------|
| *WH58.30-Z-1004-19A | Door panel release lever |

Typical Component Breakdown....Roof Front Lock Cylinder

1994-2004.... R170.....SLK-Class....1708000072

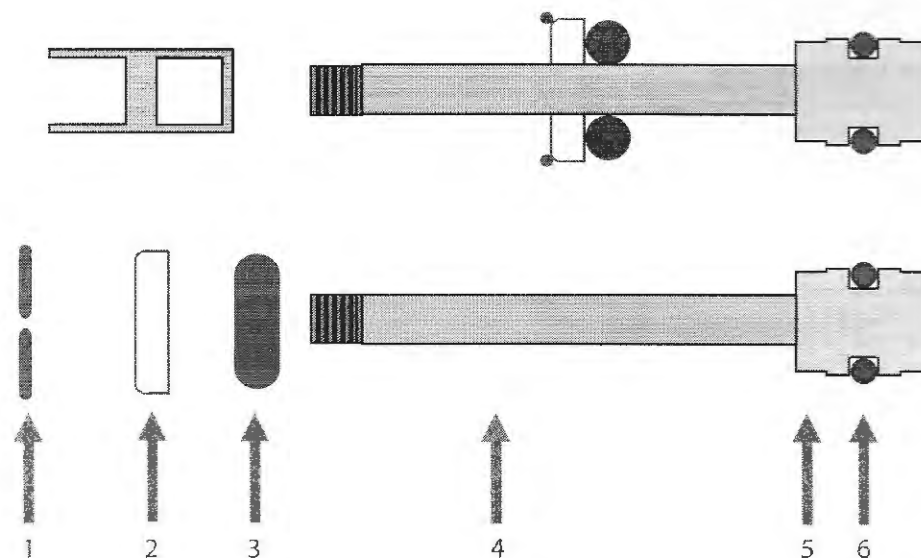
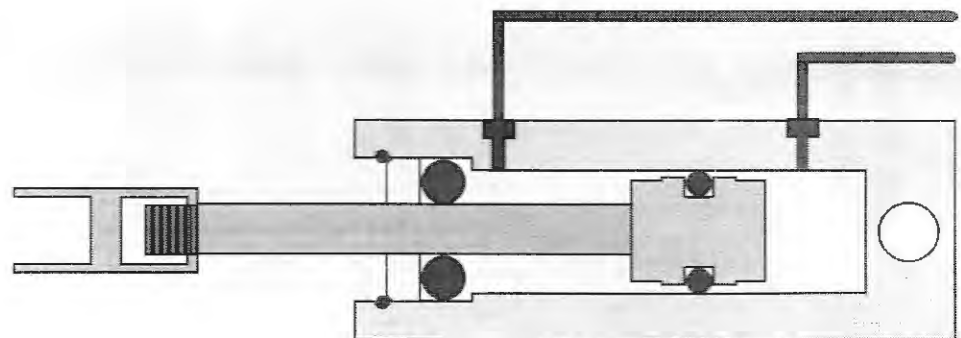
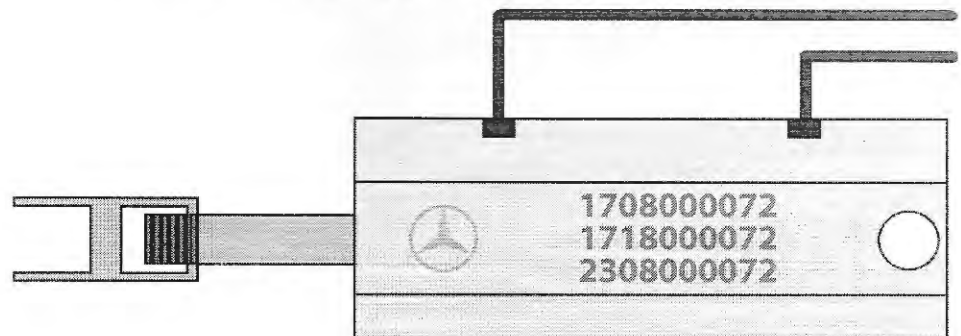
2004-2011....R171....SLK-Class....1718000072

2003-2011....R230....SL-Class....2308000072

NOTE

The Rod End Retaining Bracket Fitment Varies On All Three Chassis
(This Is Only Typical)

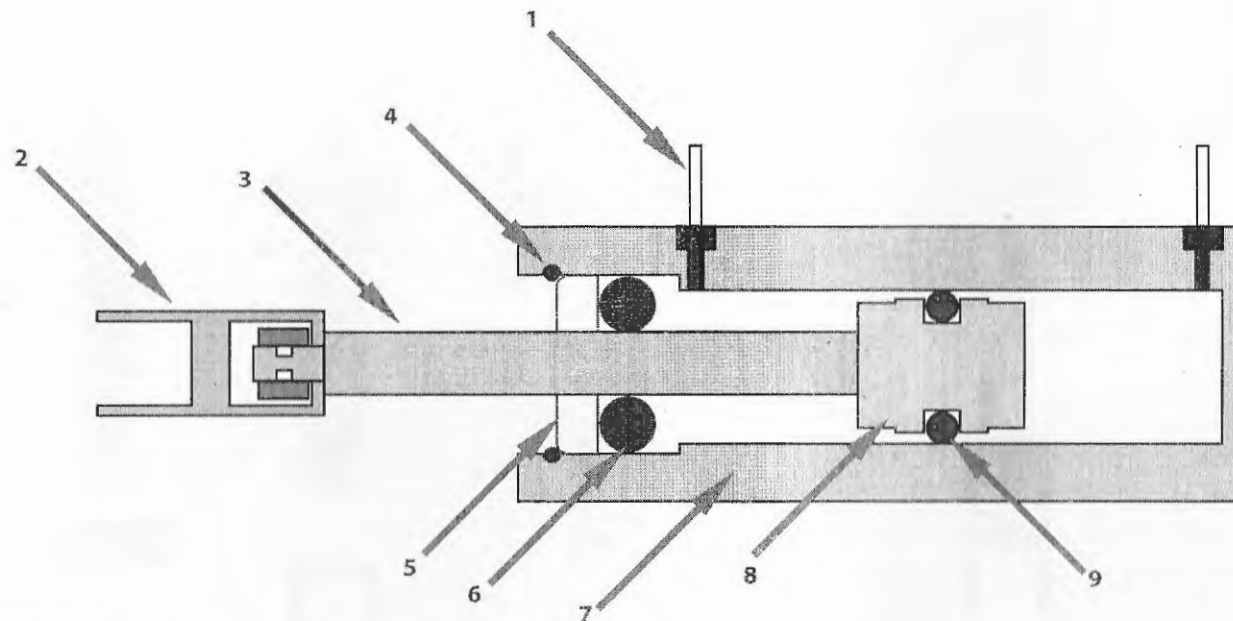
1. C Ring (Retaining Clip)
2. Nylon Rod Wiper
3. Rod O-ring "The Culprit"
4. Rod
5. Piston
6. Piston Seal LEAVE IN PLACE



NOT TO SCALE



Roof Latch Cylinder (R171) Cross Section Diagram



- 1. Hydraulic Hoses
- 2. Piston Rod Bracket
- 3. Piston Rod
- 4. C-Ring
- 5. White Bushing
- 6. Piston Rod Seal (The Culprit)
- 7. Cylinder Wall (Housing)
- 8. Piston
- 9. Piston Seal

NOT TO SCALE

Removing the C-RING Hole Drilling Method

The photo on the right shows a latch cylinder with a hole drilled in the CYLINDER HOUSING to allow for easy removal of the C-RING. This is an easy process that can save you much time and headache.

Before starting, make sure the PISTON ROD is pushed all the way into the CYLINDER HOUSING. This is necessary to protect the surface of the PISTON ROD that comes in contact with the PISTON ROD SEAL. This way if you accidentally drill into the PISTON ROD, it will not be a problem because that portion of the PISTON ROD will never touch the PISTON ROD SEAL.

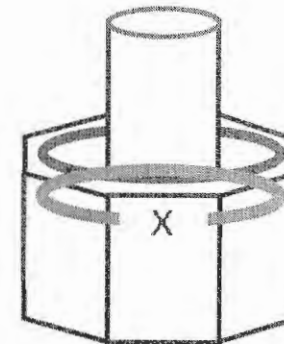
The first step is to rotate the C-RING in the CYLINDER HOUSING so that the opening of the C-RING is positioned in the spot where you will be drilling through the CYLINDER HOUSING (direct opposite face to the hose connections). See the Step 1 diagram.

Next on that face we intend to drill, mark precisely 0.1" down from the top opening face of the CYLINDER HOUSING and central on that face as per the X Step 1.

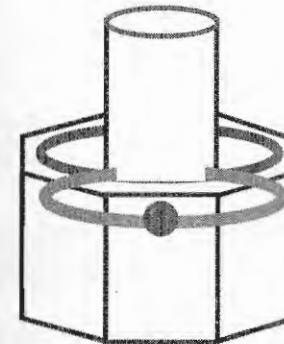
Next rotate the C-RING until the opening is passed the position of the X just marked See step 2. With a 1/8" drill bit, drill the hole carefully until the drill bit gently hits the C-RING, you will feel it because your drilling through soft aluminum, then you hit the C-RING (hard steel).

Rotate the C-RING in the CYLINDER HOUSING so that one end is showing through the new hole Step 2 and photo.

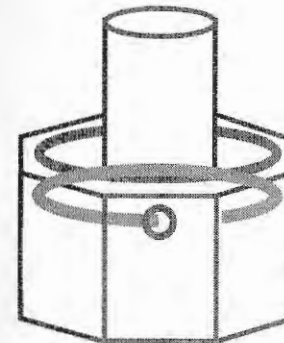
Use the staright PICK below to push into the hole and lift the end of the C-RING, while with one of the angled PICKS hook it under the lifted C-RING from above and pull upward. The C-Ring will pop out.



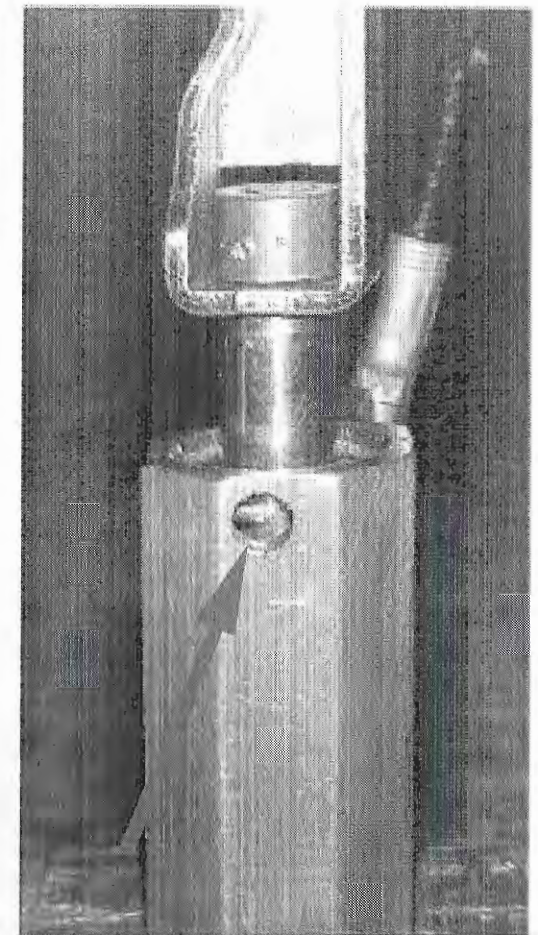
Step 1



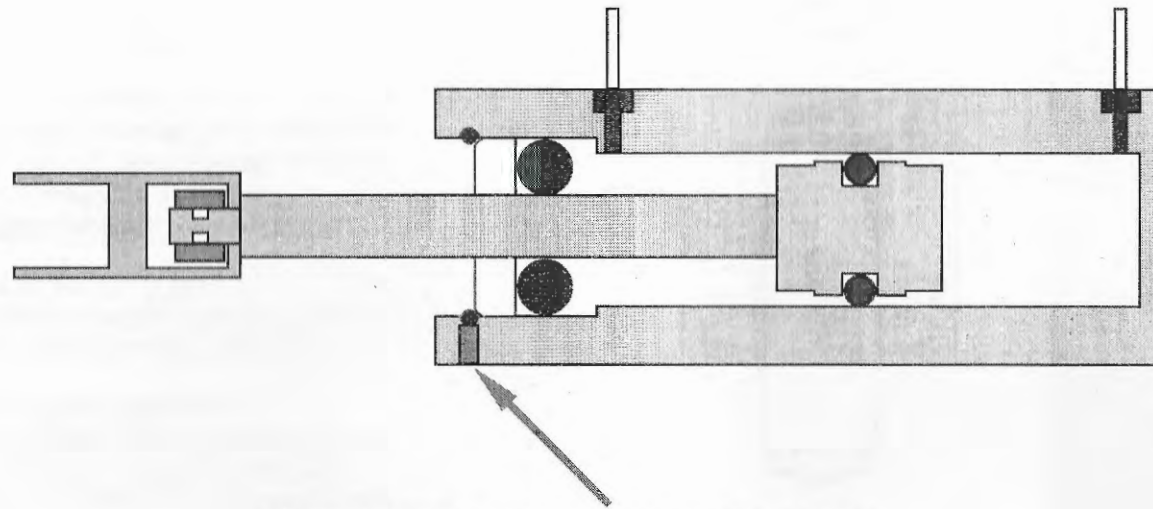
Step 2



Step 3

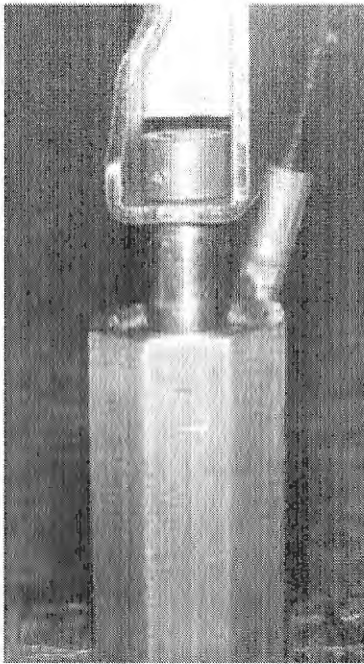


**Roof Latch Cylinder (R171)
Hole Location**

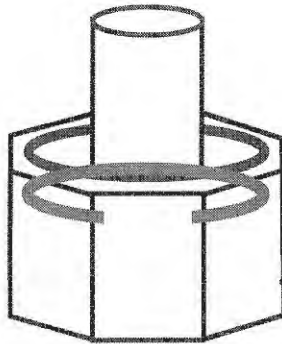
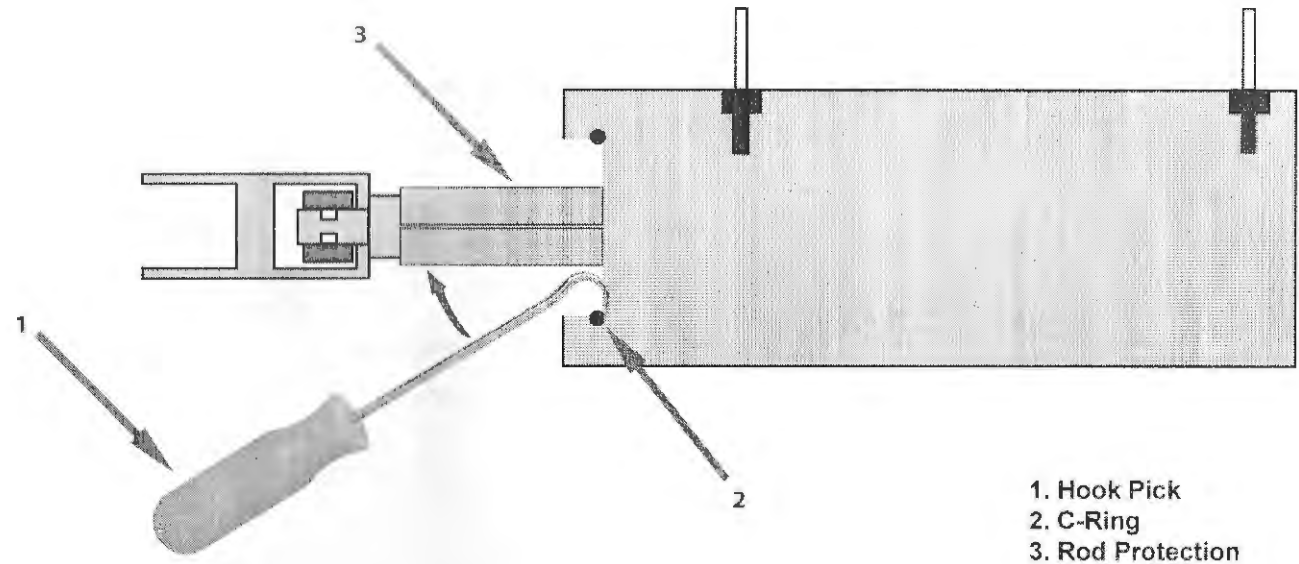


Drill hole here 0.1" down from the cylinder lip opening
Use 1/8" drill bit

NOT TO SCALE



Roof Latch Cylinder (R171 or R230) C Ring Removal Using a Hook Pick



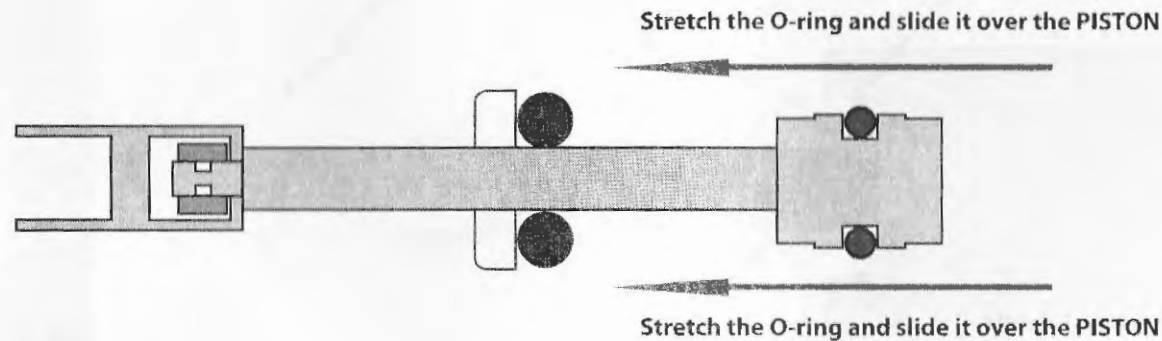
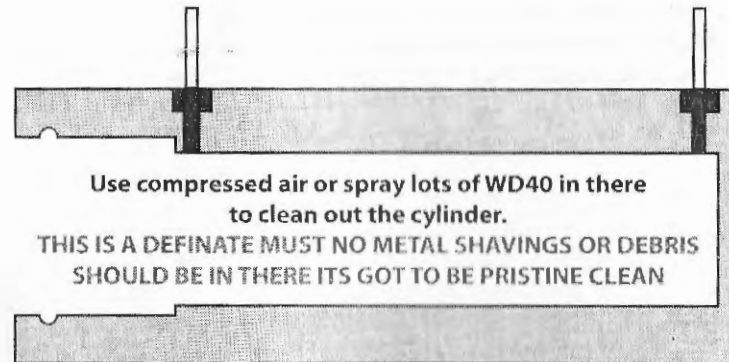
Before starting, make sure the PISTON ROD is pushed all the way into the CYLINDER HOUSING, then cover the remaining exposed rod with a thick layer of PVC tape or similar. This is necessary to protect the surface of the PISTON ROD that comes in contact with the PISTON ROD SEAL. This way if you accidentally scratch PISTON ROD, it will not be a problem because that portion of the PISTON ROD will never touch the PISTON ROD SEAL.

The first step is to locate the C-RING open ends in the recess it sits, in the CYLINDER HOUSING.

Next take to hook pick, hook it under one of the C-RING open ends and using the wrapped exposed rod as leverage lift the end of the C-RING and pull upward. The C-Ring will pop out so don't lose it

Roof Latch Cylinder (R171) Replace and Reassemble

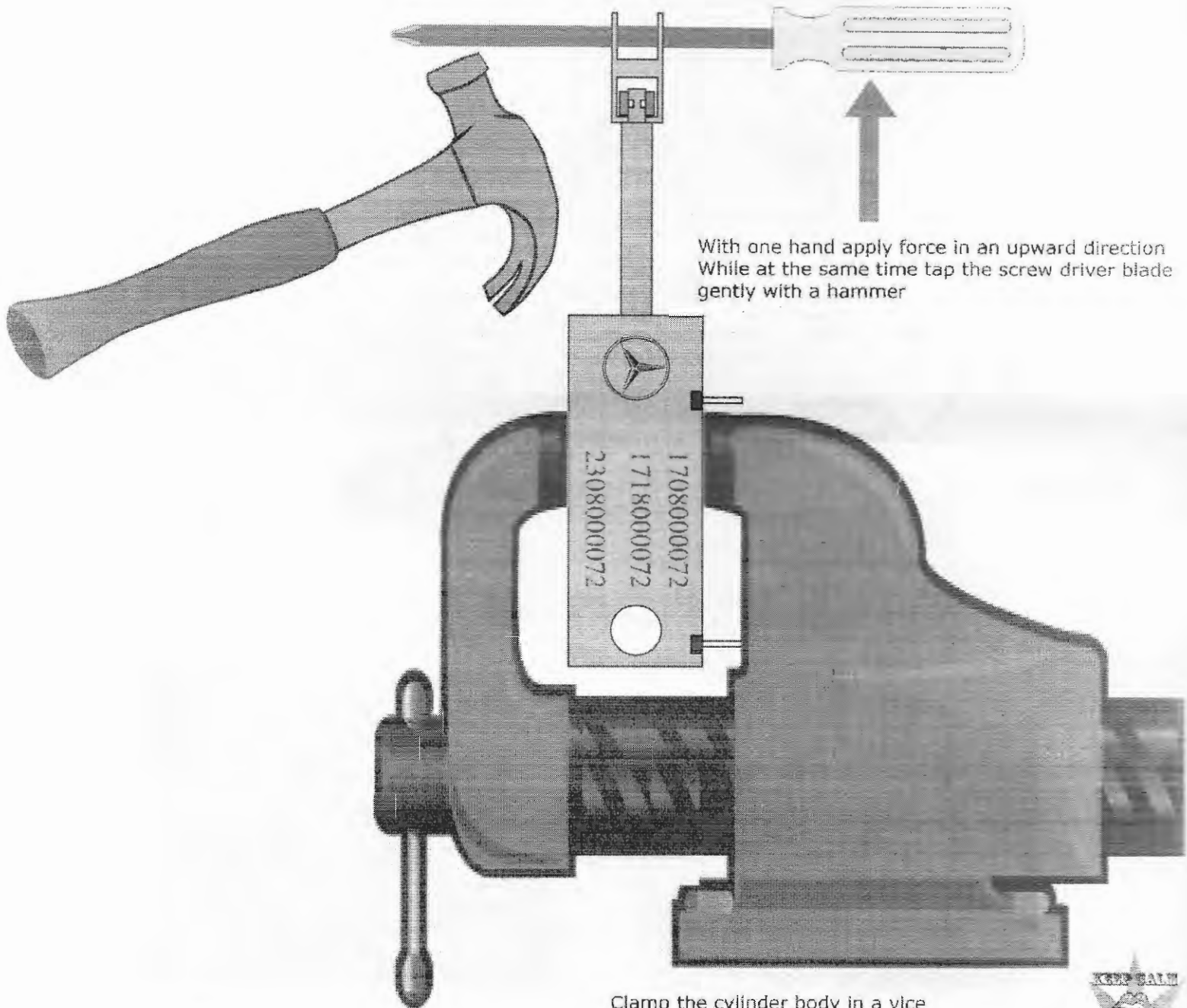
Once the C-Ring has been removed, pull the PISTON ROD assembly out of the CYLINDER HOUSING. Break off any remaining parts of the blue PISTON ROD SEAL. Use compressed air to clean off any PISTON ROD SEAL debris left in the CYLINDER HOUSING and on the PISTON ROD assembly. Stretch the new black O-ring over the PISTON and into place on the PISTON ROD between the PISTON and the WHITE BUSHING. Insert the entire PISTON ROD assembly back into the CYLINDER HOUSING and replace the C-Ring. The cylinder is now ready to be installed in the car.



NOT TO SCALE

WHEN YOU HAVE REMOVED THE C-RING

HERES AN EXAMPLE OF HOW TO REMOVE
THE VERY STUBBORN ROD FROM THE CYLINDER



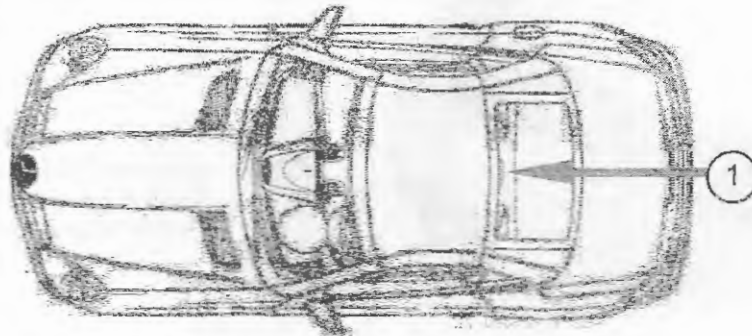
Clamp the cylinder body in a vice

NOT TO SCALE



Filling/Topping Of The Hydraulic Fluid in The Vario Roof Hydraulic Pump

R171 SLK-CLASS 2004-2011
VARIO ROOF
HYDRAULIC PUMP



NUMBER DESCRIPTION

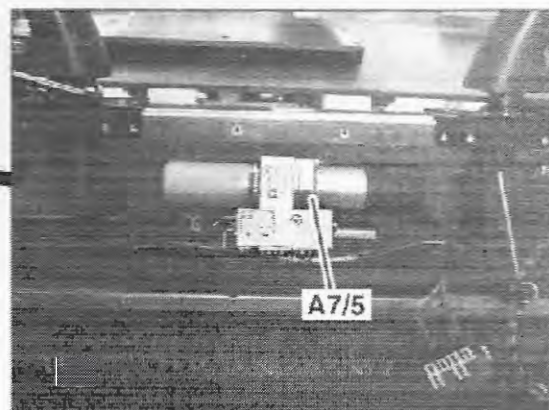
PART NUMBER

1 HYDRAULIC PUMP

1713000030



You get to the pump from the passenger compartment and you can get to it with the roof in the closed, locked (up) position. Get a drill gun and an assortment of torx bits

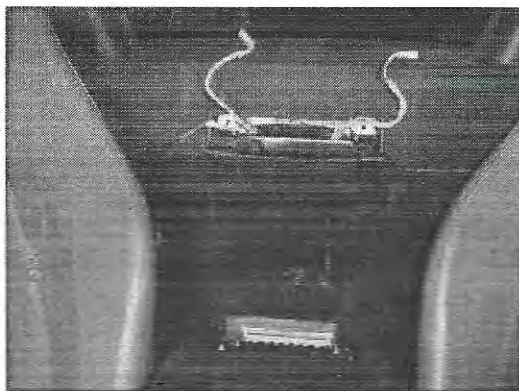


Open the doors and find the metal bracket/cover at the top of the rear door jam...there are two small torx screws for each one. Remove both driver and passenger side.

Pop off the plastic trim pieces that the seat-belts go through. Once their off, remove the big bolt holding the seat belt in place and simply move the trim piece/seat belt forward and out of the way.

Remove the large plastic trim that goes over and is in-between the two roll-bars. (this is fairly easy to unsnap across the back side). You do not need to remove or loosen the rollbars. (but there is a weird little bolt on the side of each rollbar, almost looks like a zerk fitting...you need to remove one of them so you can lift the plastic panel over the rollbar)

The rear vertical glove box on the back wall, open it, the top portion is attached with two small torx screws (one on each side near corners). After you remove the screws, it's easy to pop off, remove the speaker wires. Lay the front of the box forward on the center console.

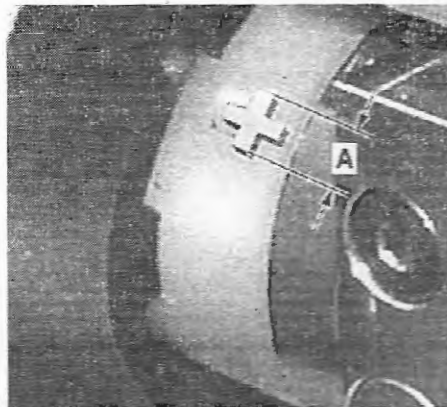


Move both seats fully forward. Remove the 2 rubber posts on the back wall, one on each side. Easy to unscrew, grip lightly and turn with pliers to get started.

Pull the carpet away from the rear wall. The top panel is attached with about 30 torx bolts...drill gun makes quick work out of it. Pull the panel.

The hydraulic pump is dead center where you removed the box.

To verify the hydraulic oil is at the correct level open the Vario roof. The Oil Level must be within the marking "A" on the rservoir with the roof open



If not proceed on

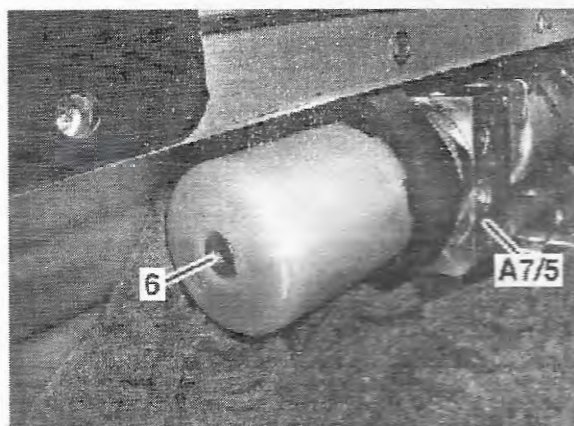
You'll have to pull open the felt like insulation to uncover it. Its stapled in place in front, remove them....its attached to the top of the pump with two zip ties; you should be able to leave them. There are two bolts on top side to loosen...now you can remove the pump.

Because of the hydraulic lines you can't move it far out of the compartment and tilt the right side down as far as possible so you have room to fill the fluid reservoir....careful with the lines.

Best to have some help...while one tilts the fluid reservoir end up as far as possible...have your helper remove the fill screw at the end of the pump reservoir and fill it

To avoid spills, transfer the hydraulic fluid with the syringe provided

You fill the reservoir about 80%...you don't want it completely full.



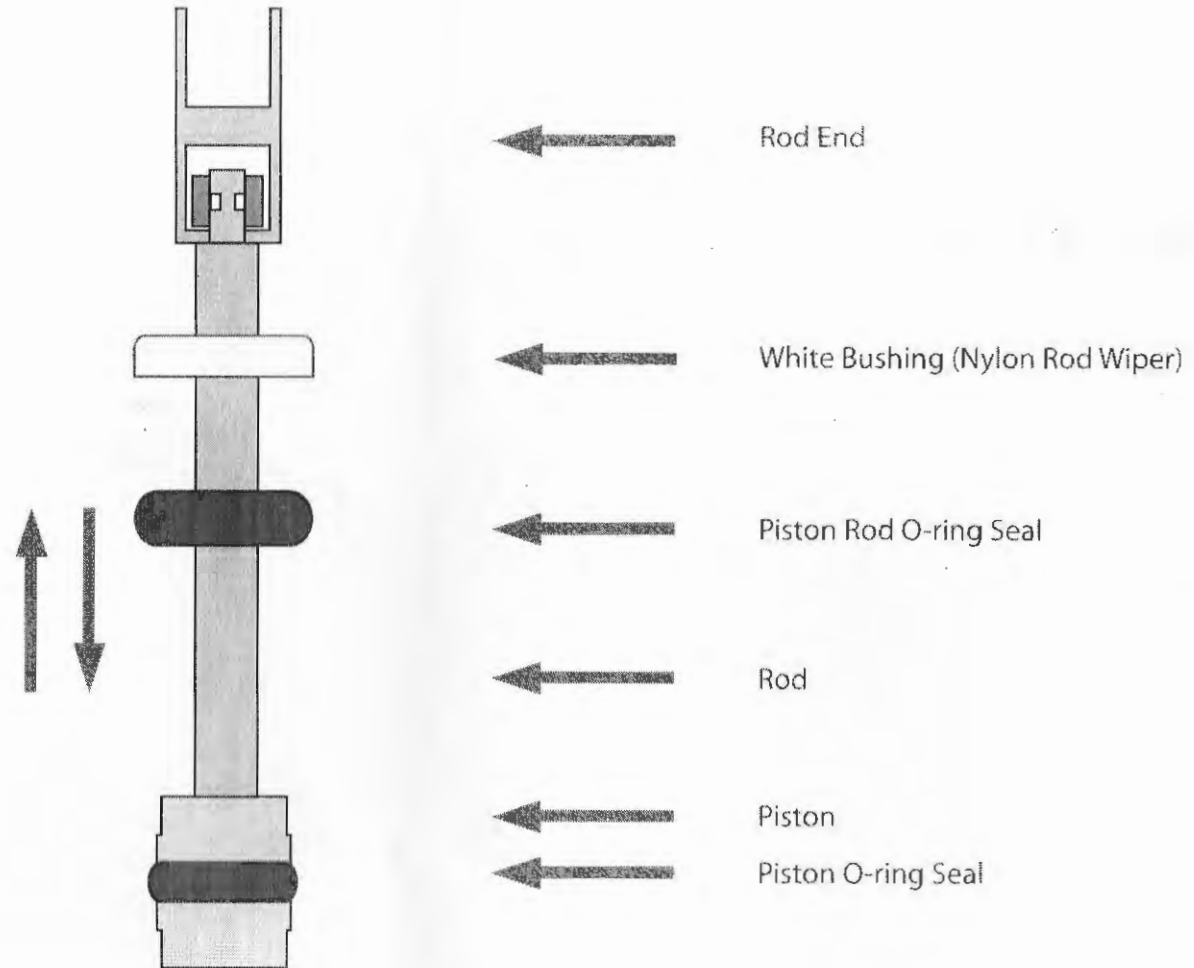
Tips

- 1) I used paper towels to fill up all crevices before removing the fill plug.
- 2) It takes very little fluid to go from low to full.
- 3) Use only Mercedes Approved Hydraulic Oil #000-989-91-03-10

MAKE SURE TO NOT **OVER-STRETCH** THE NEW PISTON ROD O-RING
To help, LUBE the O-ring with a little of the residual Hydraulic fluid

After the new Piston Rod O-ring Seal has been stretched over the piston and slid into place on the rod, leave it for several minutes to resume its normal shape again, then check to ensure it's a snug fit on the rod.

It should slide up and down the rod with a little bit of resistance but not loosely. If it does slide loose then it's been Over-Stretched.



NOT TO SCALE