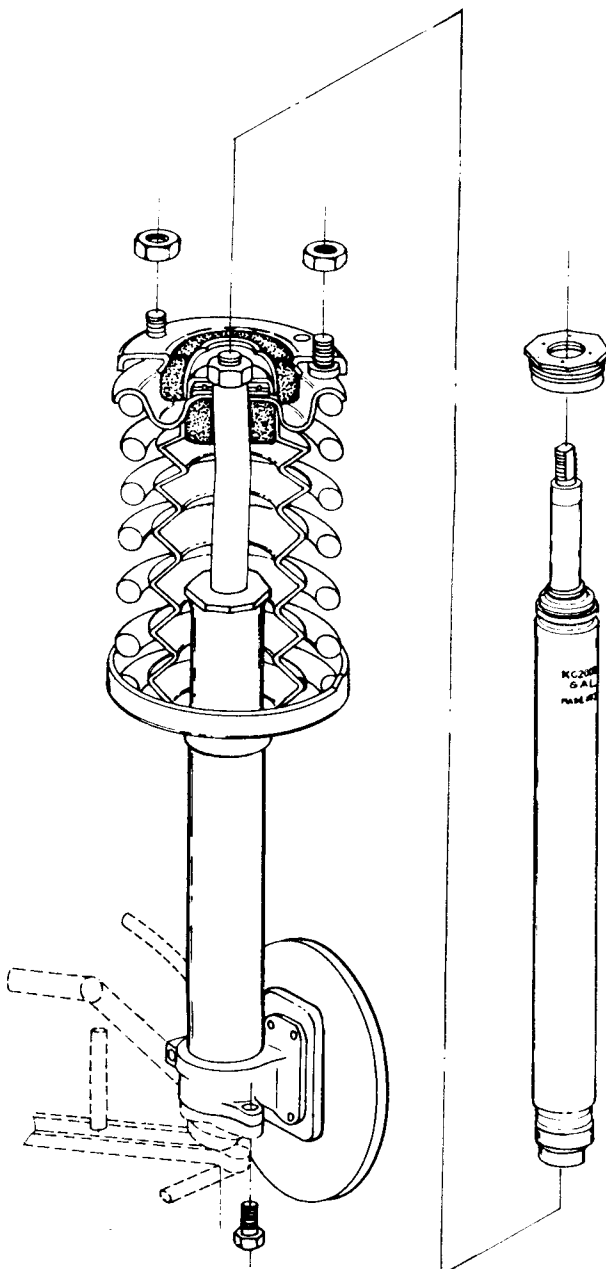


GAS PRESSURIZED STRUT CARTRIDGES

INSTALLATION INSTRUCTIONS

LOOSEN RETAINER STRING BEFORE STARTING INSTALLATION

Fig. 1



CAUTION SHOCK ABSORBER UNDER PRESSURE

Avoid fire or flame
Do not disassemble
Do not use torch
Do not puncture or incinerate

TO DISMANTLE STRUT ASSEMBLY

- Lift Hood and remove all but one of the Upper Bearing Plate Nuts. Just loosen remaining Nut.
- Mark the position of the Upper Bearing Plate so that it can be re-assembled in the same position.
- Lift Car and remove Front Wheels.
- Examine Suspension to see if Brake Line is fastened to Strut Assembly with a Clip as shown in Figure 2. If so remove Clip and Brake Line.
- If Suspension appears as Figure 3, disconnect Brake Hose. Avoid getting dirt in Hose Connections.
- Determine which of the lower bolts must be removed to disconnect Strut Assembly from Car. Remove only the necessary lower Mounting Bolts and Nuts. In some cases, Steering Arms or Ball Joints or both must be disconnected from Strut Assembly.
- Figure 4 shows Capri type strut. Remove Steering Arm and Ball Joint as shown by arrows.
- Figure 5 shows VW type strut. Remove only three Attachment Bolts as shown by arrow. Also, remove Speedometer Cable from center of wheel hub on left side.
- Pry Strut away from lower Control Arm, Ball Joint etc.
- Remove remaining Upper Bearing Plate Nut and remove Strut Assembly from Car. In some cases, Brake Drum and Caliper must be supported while Strut is removed.

CAUTION: REMOVE ONLY ONE STRUT ASSEMBLY FROM CAR AT A TIME.

- If you should get the mounting Parts mixed up and out of sequence, you can study the remaining Strut to get parts mounted back in their proper sequence and position.
- Coil Spring must be Compressed before Strut can be DIS-ASSEMBLED. Use appropriate Spring Compressor.
- After Spring has been Compressed remove Top Shaft Nut and all Mounting Parts.

CAUTION: PLACE ALL MOUNTING PARTS TO ONE SIDE IN THE EXACT ORDER THAT THEY ARE REMOVED. YOU MUST RE-ASSEMBLE ALL THESE PARTS LATER IN THE REVERSE ORDER.

- Remove Spring and leave it in the Compressed Position.
- Remove large nut at top of Strut Assembly. Now remove all Internal Parts and discard. Save VW's large nut, as it must be re-used.
- Turn Strut up-side down to remove all the Oil.

TO ASSEMBLE STRUT CARTRIDGE

Fig. 2

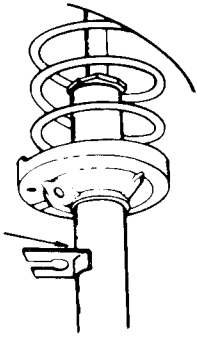


Fig. 3

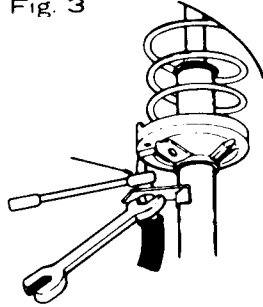


Fig. 4

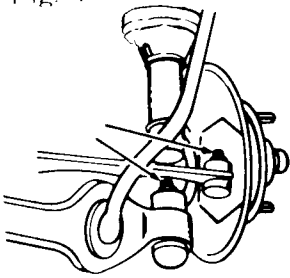


Fig. 5

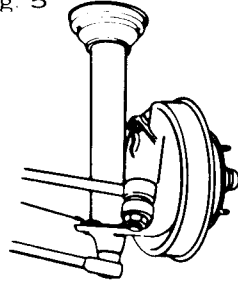


Fig. 6

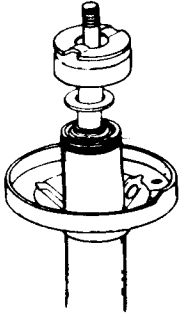
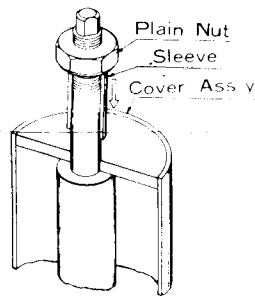


Fig. 7



- On the 1973-77 CAPRI applications, there may be a small round spacer (approximately 9/32 inch thickness x 1 3/4 inch diameter) in the bottom of the original strut assembly. It is absolutely necessary that this be removed before inserting the replacement cartridge. It may be necessary to turn the strut unit upside down and tap bottom of the strut to dislodge this spacer.

REFER TO MANUFACTURER'S SPECIFICATIONS TO OBTAIN EXACT TORQUE NEEDED ON MOUNTING BOLTS AND NUTS, IF NECESSARY.

THE BLACK RING OF GREASE THAT APPEARS ON THE SHAFT IS NORMAL AND USED TO HELP PROLONG THE LIFE OF THE SEAL. THIS SHOULD NOT BE MISTAKEN FOR OIL LEAKAGE.

- Install new Cartridge in Strut Assembly.
- VW and Similar Cars with External Threads on Strut Assembly, may require a Spacer Ring, provided with Cartridge. Install this Spacer Ring on top of Cartridge, inside of Strut Assembly before Large Strut Assembly Nut as shown Fig 6. Now tighten to Manufacturer's Specifications.
- On Fiat 128, use black large nut for Riv strut assembly, yellow for Boge strut assembly. If you cannot identify, TRY TO SCREW LARGE NUT BY HAND WITHOUT FORCING. If it can be screwed in only a few turns use the other one and make sure it goes entirely into strut assembly.

On Fiat 128 Rear Application (see Fig. 7), there is a sleeve below the shaft nut which must be removed from the original unit and placed on new cartridge shaft. To assist in forcing this sleeve into position, a plain nut (no nylon insert) is provided to be tightened down on the shaft, thus causing sleeve to position itself properly. Then remove this nut and continue with installation making sure to use shaft nut with nylon insert locking feature.

DO NOT TAP OR HAMMER SLEEVE INTO POSITION THIS WILL DESTROY CARTRIDGE INNER PARTS.

- Extend Shaft to Maximum Position.
- Replace Compression Bumper and/or Shaft Protector if one was removed from original Strut Assembly.
- Replace Coil Spring and leave in a Compressed Position.

CAUTION: SOME OF THE CARTRIDGE SHAFTS HAVE A SPLINE NEXT TO SHOULDER. MAKE SURE CARTRIDGE SHAFT IS NOT IN A COLLAPSED POSITION WHILE FORCING COLLAR OVER SPLINE PORTION OF SHAFT. USE YOUR HANDS TO KEEP SHAFT IN EXTENDED POSITION. NEVER GRIP SHAFT WITH METAL TOOLS. SEVERE DAMAGE WILL RESULT.

- Install all remaining Mounting Parts in the Correct Order.
- Make sure Spring is Correctly seated against both Spring Plates.
- Install Top Shaft Nut and tighten to Manufacturer's Specifications.
- Release Spring Slowly.
- Remount Strut to Car, reversing the procedure used earlier.
- Start by positioning Strut in correct Position and starting one Upper Bearing Plate Nut at Top.
- Make sure that Upper Bearing Plate is positioned to the Original Mark or Position.
- If Brake lines were disconnected, make sure that you re-connect them and properly bleed Brake System.
- Replace Speedometer Cable if removed.
- Re-check all lower Mounting Bolts and Nuts to make sure they have been tightened securely before car is lowered.
- Tighten Upper Bearing Plate Nuts Securely.