



## Control Arm Front Monoball - Installation Instructions

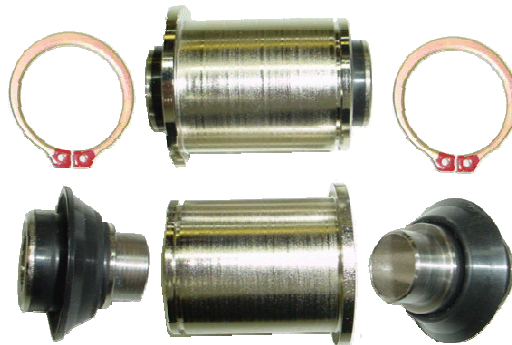
Part # 2201700

### Cars applicable:

'85 – '91 944 series

### Parts list:

Qty	Description
2	Monoball cartridge
2	Beveled retaining ring



Rear Monoball Kit with weather seals

### Introduction –

Monoball cartridges replace the rubber bushings and metal cups of the front control arm mount.

The monoball cartridges are pre-assembled. Installation entails pressing the cartridge into the control arm, then securing each with a single retaining ring.

The monoball cartridges have maintenance free PTFE linings and require no supplemental lubrication.

Do not install monoball cartridge backwards – be sure to follow the instructions and properly orient the monoball cartridge.

Do not install retaining ring backward – be sure to follow the instructions and properly orient the retaining ring with the red mark visible.

Failure to properly install cartridge or retaining ring will result in an unsafe condition.



## Step-by-Step Installation -

1 – Remove control arms from the car.

Refer to an appropriate shop manual.

2 – Remove the rubber bushings.

Secure the control arm in a bench vise.

Heat the center metal spacers with a propane torch until a small wisp of smoke is visible. The center spacers can then be pried off with a screwdriver. Pull out the rubber bushings.



3 – Remove bushing metal cups.

Secure the control arm in a bench vise. The cup halves meet in the center of the bore. Using caution not to damage the soft aluminum of the control arm, position a chisel in the union between cup halves and drive them out from the bore. Heating the aluminum around the cups with a propane torch will expand it and make it easier to drive them out.



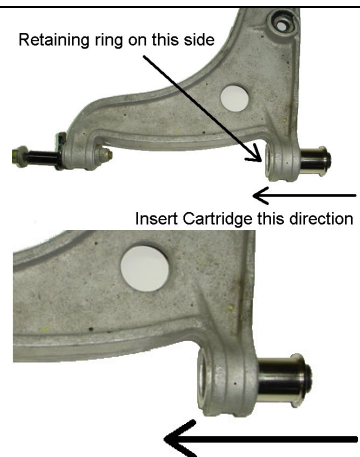
4 – Install monoball cartridges into control arms.

Inspect the control arm inner mount. Remove any dirt and file smooth any nicks or cuts on the face of the mount. This surface needs to be smooth and flat to ensure the retaining ring seats properly.

Orient cartridge so the retaining ring side is facing rearward when installed in the car. This orientation is very important, be sure to get it right!

Press the cartridge into the control arm in the direction shown. If the fit is very tight, the control arm end should be heated with boiling water (210°F). The heat will expand the arm and make it easier to press the cartridge into place. Torch-heating is not recommended, it may overheat and cause damage to the bearing once pressed in.

Use an appropriately sized socket or suitable cylindrical device to distribute the press load on the body of the cartridge, do not the spacer or center bearing.



5 – Install the retaining ring.

Note the retaining rings have a slight bevel on one side only. This side is marked with red dots. The red side with bevel MUST face out such that the red dots are visible after installation.

The bevel tightens the retaining ring against the control arm face. If it is installed upside down, the ring will not tighten properly. Be sure to install the retaining ring properly.

Use proper snap ring pliers and avoid over-expansion of the retaining ring during installation.

After installation there should be no noticeable play between retaining ring and control arm face. In the event that any play is present a shim should be fashioned from shim stock and used to eliminate the play.

Red marks up, bevel side up



6 – Install control arms into car.