



POSITIVE STEERING RESPONSE SYSTEM

for 2002+ Mini Cooper S and Standard

Thank you for purchasing this ALTA product for your car! Installation of this product should only be performed by persons experienced with installation of aftermarket performance parts and proper operation of high performance vehicles. If vehicle needs to be raised off the ground for installation, the installer must use proper jacks, jack-stands and/or a professional vehicle hoist for safety of the installer and to protect property. If the vehicle is lifted improperly, serious injury or death may occur! Please read through all instructions before performing any portion of installation.

SUSPENSION INSTALLATION NOTE

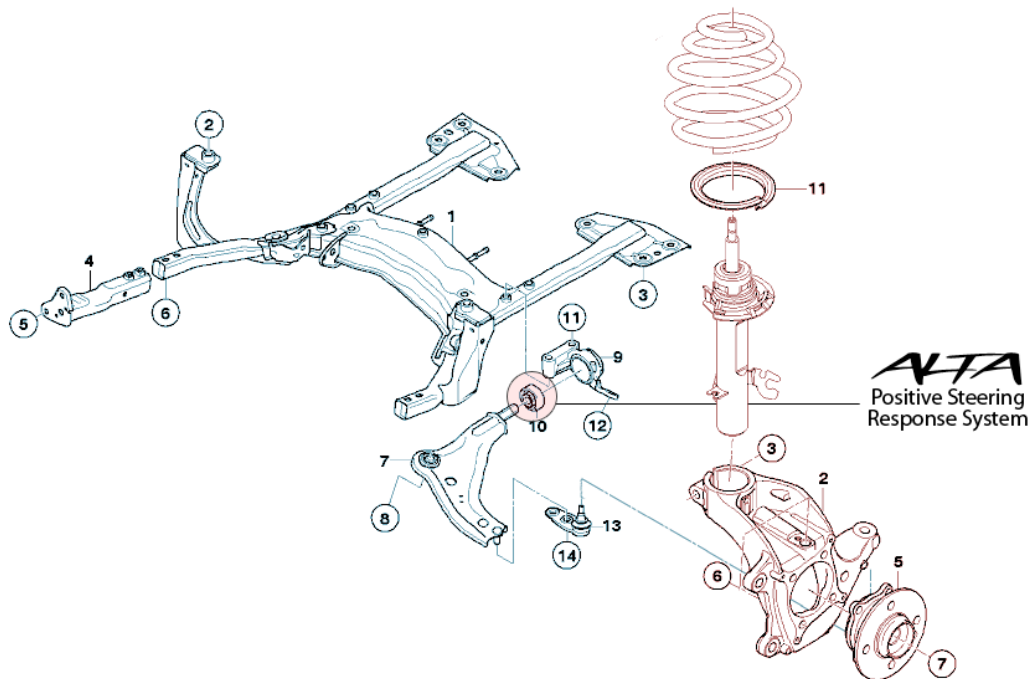
Installation of this product is a modification to the vehicle suspension. As a result, the vehicle may handle differently than that of factory-equipped vehicles. As with any vehicle extreme care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts, and drive safely, recognizing that reduced speeds and specialized driving techniques may be required. Failure to drive this vehicle safely may result in serious injury or death. Do not drive this vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications (and combinations of modifications) are not recommended and may not be permitted in your state or country. Consult your owner's manual, service manual, instructions accompanying this product, and local laws before undertaking these modifications. You are responsible for the legality and safety of the vehicle you modify using these components.

SPECIAL NOTES:

- A hydraulic press is needed for removal and installation of P.S.R.S.
- A professional 4 wheel alignment is necessary after installation. Its recommended that vehicle be towed to alignment shop before driving. If any driving is required before alignment, take extreme care. ASMC LTD is not responsible for any damage that may occur prior to alignment of vehicle.

Parts Included with ALTA PSRS

- (2) PSRS bodies
- (2) PSRS Urethane ball joints
- (1) Grease Packet



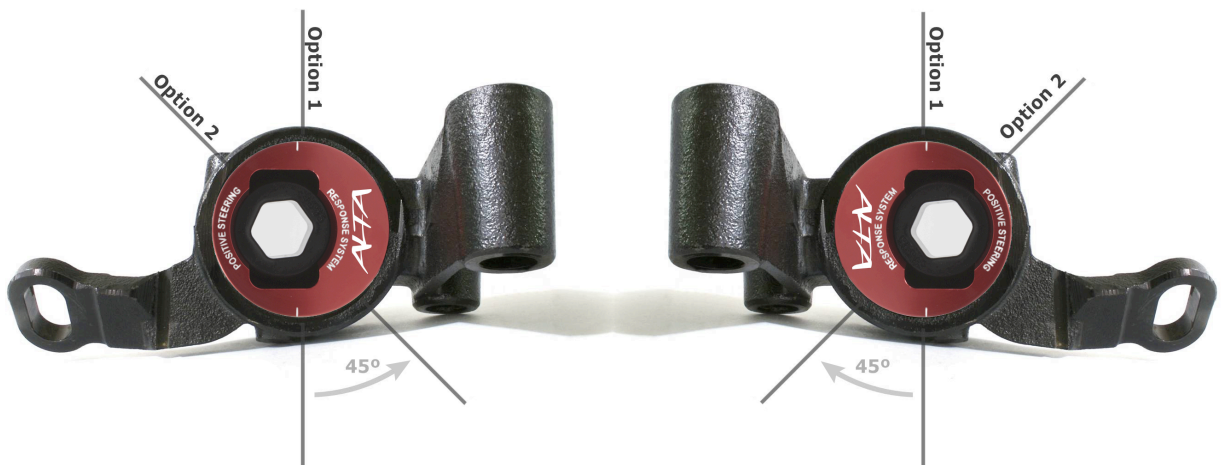
Removal and Installation:

- 1) Park car on a smooth level surface. Using suitable commercial vehicle hoist or floor jack, raise vehicle onto jack stands. NEVER WORK UNDER A VEHICLE SOLELY SUPPORTED BY A JACK! DEATH OR INJURY MAY OCCUR.
- 2) Using factory service manual for reference remove both front control arms from vehicle. This will require the use of proper ball joint removal tools and or air hammer with proper inserts.

- 3) Locate black steel mount containing rubber OEM control arm bushing (This is bolted to sub frame). Sub frame will have to be lowered to access bolts holding rear control arm mount. Carefully place jack under each side of sub frame and remove bolts holding it to chassis. Remove (8) bolts at the back, (2) large bolts next to strut. Remove (2) bolts securing control arm mounts to chassis.
- 4) Lower sub frame roughly 3-4". Some pulling down may be needed to gain access to hardware holding mount to subframe. **NOTE: Take care not to pull too far, as this can damage other items still connected to sub frame like the power steering system.**
- 5) Remove (2) bolts on each side securing sway bar, and control arm mounts to sub frame. Push sway bar up and out of way, and remove mounts. Make sure to keep track of orientation of mounts left to right, and front to back.
- 6) Using a hydraulic press and proper sized bushing, press OEM rubber bushings out of mount. **NOTE: You can purchase proper bushing from your Mini dealer to make installation easier.**



- 7) The ALTA PSRS can be pressed into the mount in many ways. See below pics demonstrating the different effects. Once you have determined where you want to press the PSRS into the set PSRS with logo facing the front of the car, and press completely into bushing mount. It is important to press on the body of the PSRS not bushings.



Option #1 provides most caster, roughly (1.5 degrees)

Option #2 provides added caster, roughly (.75 degrees), and added anti-lift.

- 8) Install PSRS and mount back to subframe, same orientation as it was removed earlier. Reinstall hardware holding swaybar bushings and brackets to subframe. Tighten bolts factory specs.
- 9) Push subframe back up to chassis and reinstall all hardware removed in previous steps and torque all bolts to factory specs.
- 10) Using supplied grease, lubricate hex shaped portion of control arm and slide into PSRS bushing. **NOTE: Some twisting may be needed to line up hex shape with inside of bushing in PSRS.**
- 11) Install inner and outer ball joints back to their mounting locations. **NOTE: You will need to slide control arm in and out of PSRS to get ball joints to line up. If you are having a hard time getting them to slide in, using a pry bar to help.**
- 12) Tighten ball joint to sub frame, and install outer ball joint to strut's hub. Tighten bolts factory specs.
- 13) Lower vehicle from hoist or jack stands.
- 14) Take for short test drive. If abnormal noises are noted, check torque specs on all nuts and bolts.
- 15) Immediately drive (preferably tow) to professional alignment shop.
- 16) Have vehicle professionally aligned to factory or desired specifications only as recommended by a qualified professional.