

TMS E46M3 Race Camber/Caster Plate (Bearing Style)

PART # TSU4680651

The TMS E46M3 race camber/caster plate is designed to be used for racing coilover suspensions which use a 60mm, 2.25" or 2.5" ID spring, such as Bilstein PSS9/10, Moton, JAZ, AST, KW, and Koni. Camber is adjusted by simply unbolting the top three bolts and sliding the plate. Caster is adjusted by unbolting the camber bolts and sliding the plate back and forth. Camber has a wide range of adjustment, from stock to a full race setting. These plates are the result of several months of design and testing. Detailed settings and combinations will depend on each car's suspension geometry. Originally, our plates were designed for use with the Bilstein PSS9 front struts but with 60mm ID race springs (not the standard PSS9 springs). These will also work on Moton Club Sports and other struts that use a 14mm or 16mm shock shaft. Camber is adjusted by simply loosening the top three bolts and sliding the plate. Caster is adjusted at any time from the top of the car. Camber has a wide range of adjustment, from stock to a full race setting (about -1 degree to -3.6 degrees) Detailed settings and combinations will depend on each car's suspension geometry, ride height etc. When ordering specify/select an upper spring perch in the ID of springs you will be using.

Technical Specifications

- *No strut tower cutting needed*, therefore the strength of the strut tower is not compromised
- **Average Camber Range** $\approx -1.23^\circ \pm .33^\circ$ to $-3.23^\circ \pm .33^\circ$
 - Caster and Camber Ranges are dependent on setup and the suspension combination used
- Wide Race 3/4" High Performance Bearing to handle high axial loads better (Replaceable), where most manufactures use 5/8" bearings.
- Complete stress analysis
- Compatible with BMW Motorsport strut brace.
- The mounting height is based on optimum shock travel for our shock kits, but can be customized to fit any system's specifications.
- Uses high strength spiral rings to constrain bearings.
- CNC machined from high grade aluminum billet and Mil-A-8625F Type III anodized (hardcoat) for protection
- Kit is designed to work with 60mm, 2 1/4", or 2 1/2" race springs
- Spring perches are specifically made for the E46 M3 shock, available separately
- Spring perches for 60mm, 2 1/4", or 2 1/2" race springs are available separately for stock style E46 M3 shock pins
- Shock nut is accessible at the top of shock tower for quick spring changes without affecting static caster or camber.
- Utilizes a full round upper plate to spread more force throughout the strut tower to PREVENT deformation.

Parts list for kit:

- 2 – Upper plates
- 2 – Lower bearing carriers (with bearing assembled)
- 2 – Lower slides (with bolts welded in)
- 6 – M8 Flange nuts
- 8 – M8 bolts
- 8 – Slide washers (for M8 bolts)
- 2 – 14mm bearing sleeves
- 2 – 14mm upper washers
- 2 – 16mm bearing sleeves
- 2 – 16mm upper washers

Install time: 3 hours (no alignment)

Directions:

1. Properly lift and support the front end of the car, and remove the wheels
2. Undo the swaybar links from the swaybar.
 - Requires a wrench (16mm) to be inserted behind to remove
3. Remove shocks (easiest to assemble everything). May also want to remove brake calipers to prevent damage to brake lines.
 - Support the control arm assembly with a jack
 - Remove headlight adjusting link (if equipped)
 - Loosen the lower shock bolt enough to let the shock body twist (note orientation)
 - Remove the top strut mount nuts (there are three).
 - Lower the control arm assembly. Be careful not to damage the brake lines or any other connecting wires/parts, and pull out the entire strut assembly.
 - Remove top strut plate by using a spring compressor and removing the top shock nut.
4. Assemble camber plates
 - Slide springs over shock shaft
 - Slide spring perch over shock shaft and fit onto spring.
 - Put on entire camber plate assembly. Make sure the bearing sleeve is seated on the spring perch and in the actual bearing.
 - Put on shock washers and shock nut.
 - Caster can be set at this time. Most people will want the caster placed fully to the back of the car.
5. Install Camber plates and shocks
 - Place the shock shaft into the spindle properly oriented and torque bolt to:
81 N*m (61 ft*lb)
 - Raise the control arm assembly up until it's close to the shock tower.
 - Make sure the camber plate is properly oriented and raise the control arm assembly up making sure the bolts go all the way through the shock tower.
 - Tighten the M8 nylocks.
 - Hook up the swaybar links

*******Do not hook up swaybar links if doing one side at a time. Both sides need to be undone*******
6. Alignment: To adjust the caster, the camber bolts must be loose and the plates able to slide back and forth. After caster is set, Camber can be set.
 - Adjust the caster so the shock is the farthest back towards the rear of the car possible.
 - Tighten down the 4 M8 bolts and torque to: 10 ft*lbs (Do not over torque!!!)
 - Adjust the camber so the shock is leaned the farthest to the outside of the car possible.
 - Take to alignment shop with your required settings or they will set everything close to stock.
 - To adjust, the car should have the weight taken off of it to reduce wear and tear and prevent damage to the plates.

Adjusting Caster

- Loosen the 3 camber nuts (A). This allows the Plate to move so each caster bolt can be accessed.
- Loosen the 4 caster bolts (B) and adjust to desired position. Tighten Caster bolts (do not over tighten).
- Reset camber settings.
- Tighten camber nuts.

Adjusting Camber

- Loosen the 3 camber nuts (A) and slide plates into desired position. Tighten Camber bolts.

