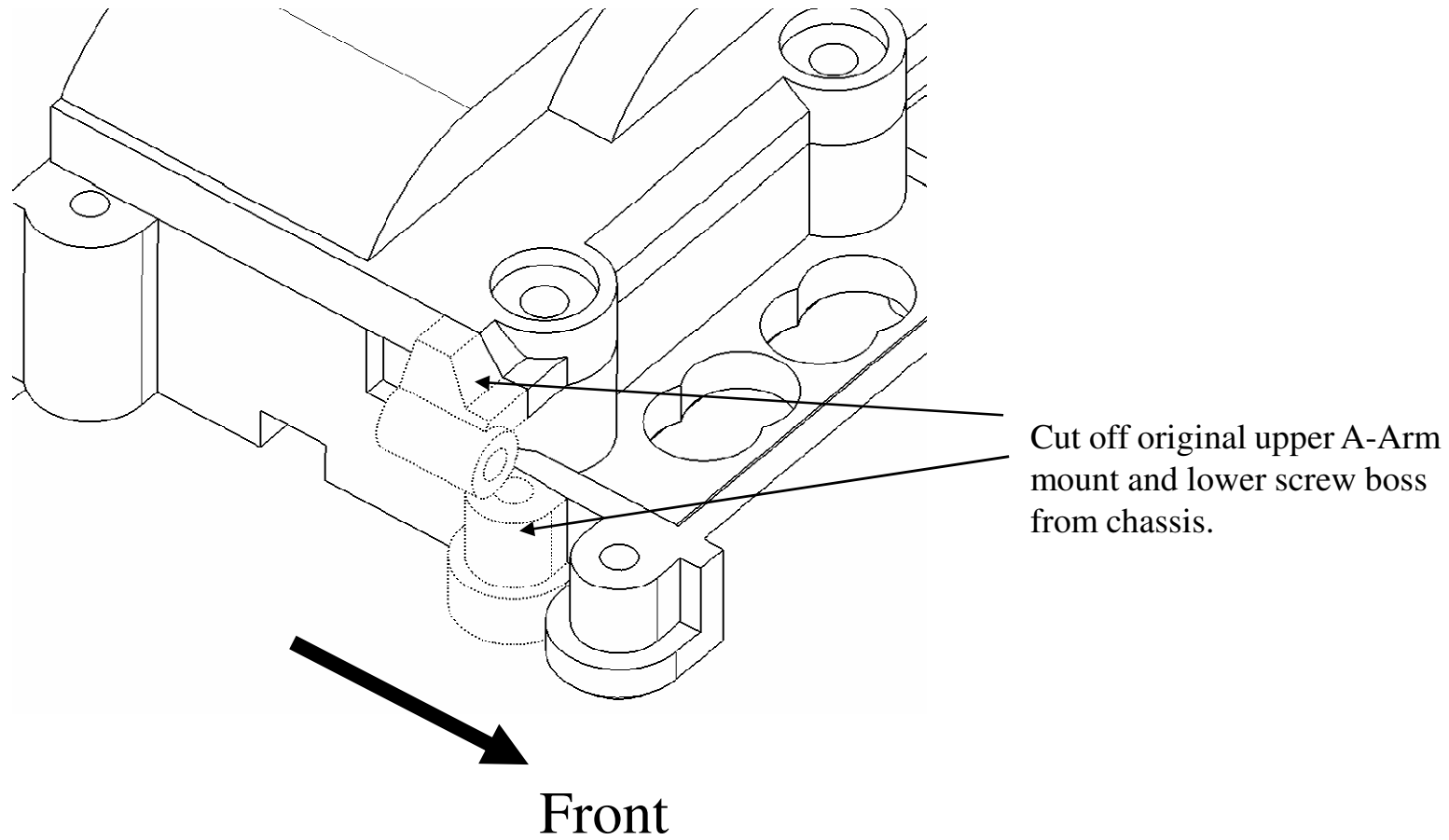


## MR-03 Front A-Arm Suspension Instructions

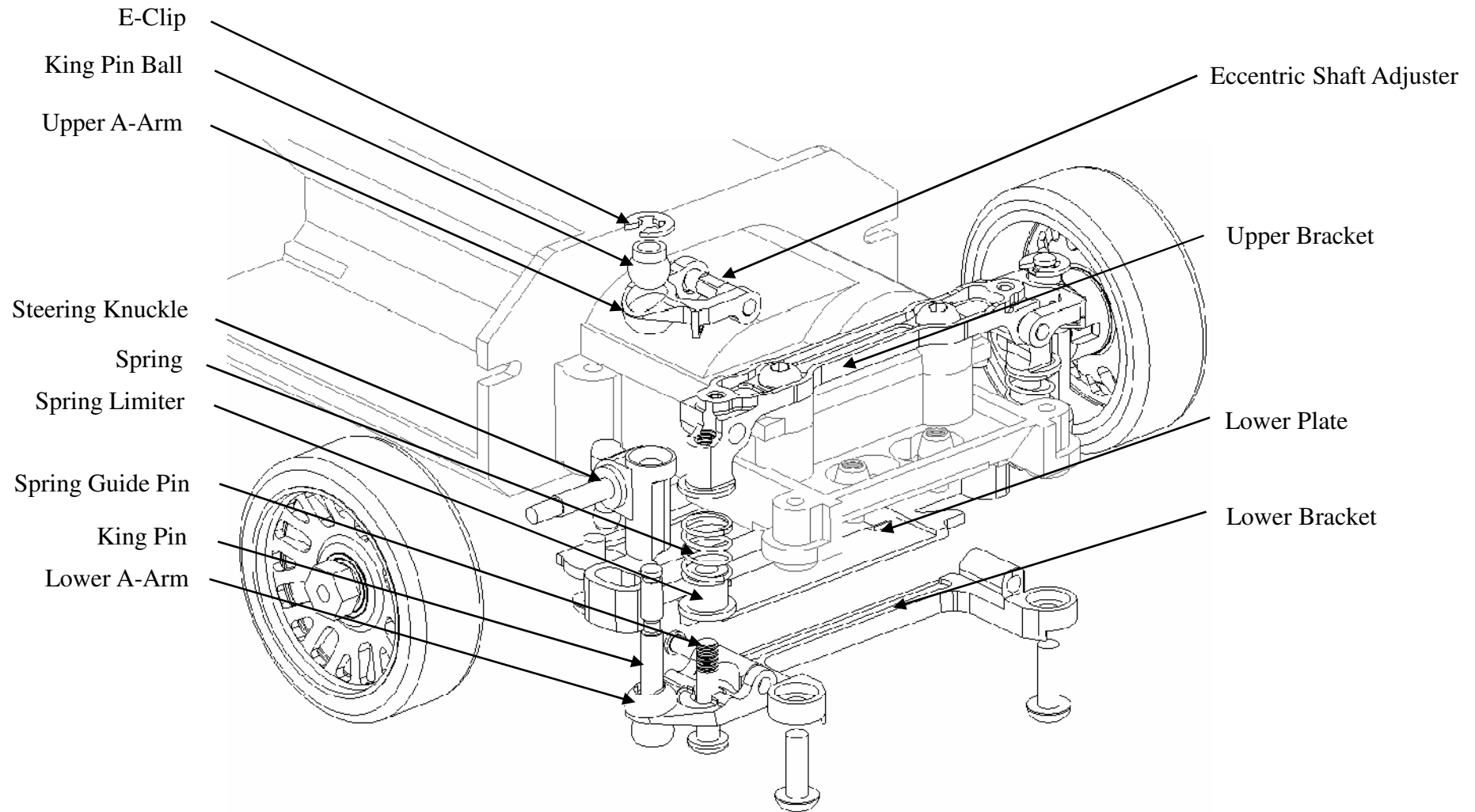
# MR-03 A-Arm Front Suspension

- Unequal length A-Arm suspension for MR-03 chassis.
  - Modeled after full scale performance car suspension for realism.
  - Double A-Arm suspension gives good control of suspension geometry and roll center during travel.
  - Camber change with suspension compression during cornering keeps wheels near vertical for maximum tire contact with road. Allows for precise cornering and maximum road holding.
- Direct suspension swap
  - Same width as stock. (MR02 width)
  - Ride height remains the same as stock.
  - .5mm wider front steering geometry for less offset and faster steering. Overall width still remain the same to fit Auto Scale bodies.
- No bump steer throughout suspension travel.
- Suspension movement use ball joints instead of sliding knuckle. Eliminates stiction associated with sliding pin especially with high offset wheels.
  - Low stiction results in consistent cornering.
- Machined aluminum ball socket instead of snap fit. Joints will not pop out even during hard collision.
- Adjustable camber from 0-3° degrees with 1.3°/mm of camber gain.
- Adjustable caster from 0-1.8° degrees
- 4 position adjustable upper A-Arm pivot
  - Changes camber gain, static camber and roll center
  - Quick adjustment with set screw
- Includes 3 tie-rods: 0° , +.5° and +1°
- Quick down stop adjustment with turn of a nut
- Benefits of the sophisticated suspension system are precise cornering and maximum road holding which adds to mini-z driving pleasure

# Chassis Preparation



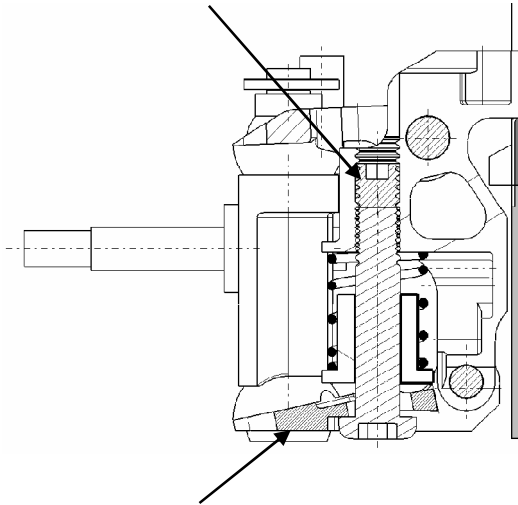
# A-Arm Suspension Assembly



# Suspension Adjustment

## Droop Adjustment

Tighten set screw after droop adjustment



When bottom of A-Arm is horizontal with ground, suspension is at stock ride height. Each additional 1/4 turn of spring guide screw drops ride height by .2mm, or 1 washer equivalent of suspension drop.

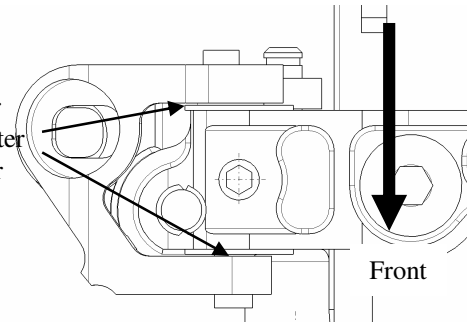
## Tie Rod Adjustment

Due to wide track feature of the A-Arm suspension, wider tie-rods are necessary to compensate for geometry. Included are 0°, +.5° and +1° toe out tie rods.

If a stock MR03 tie rod is used, a +3.5° toe out will be equivalent to 0° on the A-Arm suspension.

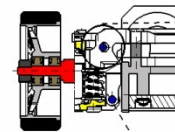
## Caster Adjustment

Two washers in front = 0° caster  
 Washer on both sides = .9° caster  
 Two washer in rear = 1.8° caster



## Camber Gain and Camber Adjustment

Static Camber: 1°  
 Camber Gain: 0.89°



Static Camber: 0°  
 Camber Gain: 1.07°

Eccentric Shaft Position

Static Camber: 2°  
 Camber Gain: 1.01°

Camber gain given in degrees per mm of suspension travel.  
 Tighten upper set screw after adjustment

Note: right side shown, left side mirror image

Static Camber: 1°  
 Camber Gain: 1.24°