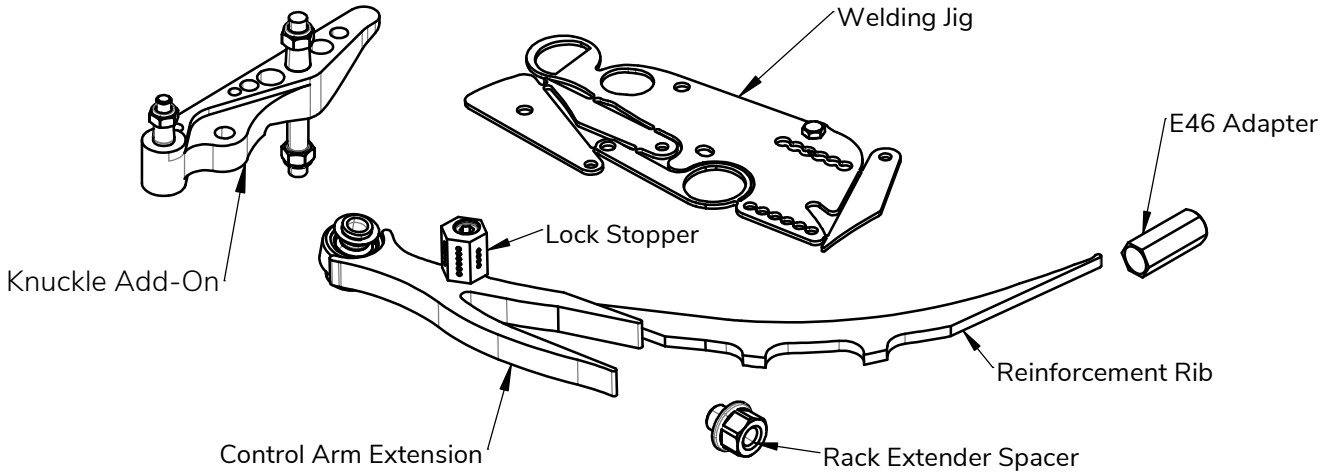
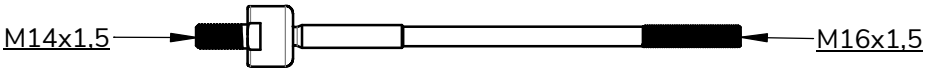
Wisefab BMW E36/E46 DIY Drift Kit installation guide.

This manual describes the modification process of the E36 control arm. Use only non-M 91-99 steel control arms with 49mm outer ball joint. This guide has been made using the right control arm, left control arm is modified the same way.



· With this kit the control arm can be widened from 30 to 80mm.
· To achieve full lock on E36 the control arm has to be widened 60mm.
· To achieve full lock on E46 the control arm has to be widened 80mm.
· Depending on tyre size and lock stopper position, the tyre may rub on the anti-roll bar when in full lock.
· Factory struts can be used, but coilovers and/or adjustable top mounts are advisable.

For inner tie rods use Ford/Mazda part number EC0132240 or YL8Z3280EA. For tie rod ends use Ford/Mazda part number EC0132280 or 5L843289AA. When buying tie rods make sure the inner end (rack side) is **M14x1,5 male** and outer end **M16x1.5 male** thread.



1. Make sure that You have all the required tools on hand. You will need:
· Safety equipment (welding mask, goggles, gloves)
· Fine tip permanent marker, measuring tape, scissors
· Wrenches
· Angle grinder with cutting and sanding discs, burr removal tool (die grinder)
· Welding equipment

2. Print and cut out the paper template which is at the end of this guide. Dotted line on template is for positioning, bold solid line is for marking the cutting line. In case you printed out the manual yourself, then there is a scale check line 127 mm or 5“ long. If actual measurement is not that, then check your printing settings and reprint it until actual measurement is 127 mm.

3. Remove the protective oxide layer from the provided parts, failure to do so will result in poor welds and a weak part.

4. Press out/remove the outer ball joint.

5. Cut apart the welding jig.

6. Grind away paint/rust from the highlighted area.

7. Install welding jig as shown on the picture. If there are higher casting marks on the control arm, grind them flat until the jig sits flat on the control arm. Make sure the jig is firmly situated in the ball joint bore. Push the jig in the direction of the arrow and attach it to the anti-roll bar mounting hole. Use the M10x55 allen head Lock Stopper bolt.
Do not overtighten the bolt or the jig will deform!

8. Attach one of the tabs to the jig as shown in the picture.

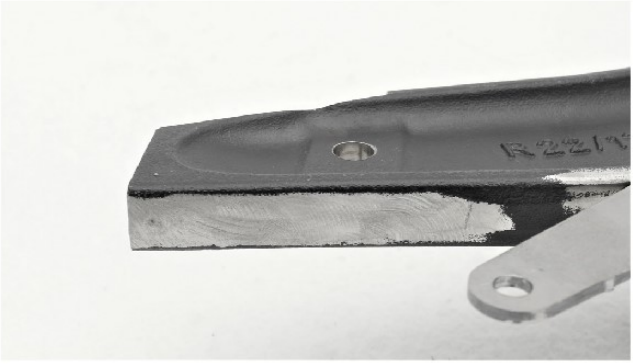
9. Tack weld the tab from the underside and remove the jig.

10. Cut out the template at the desired control arm length and position it as shown in the picture. 60mm length shown in the picture.

11. Mark the cutting line and cut off the marked section.

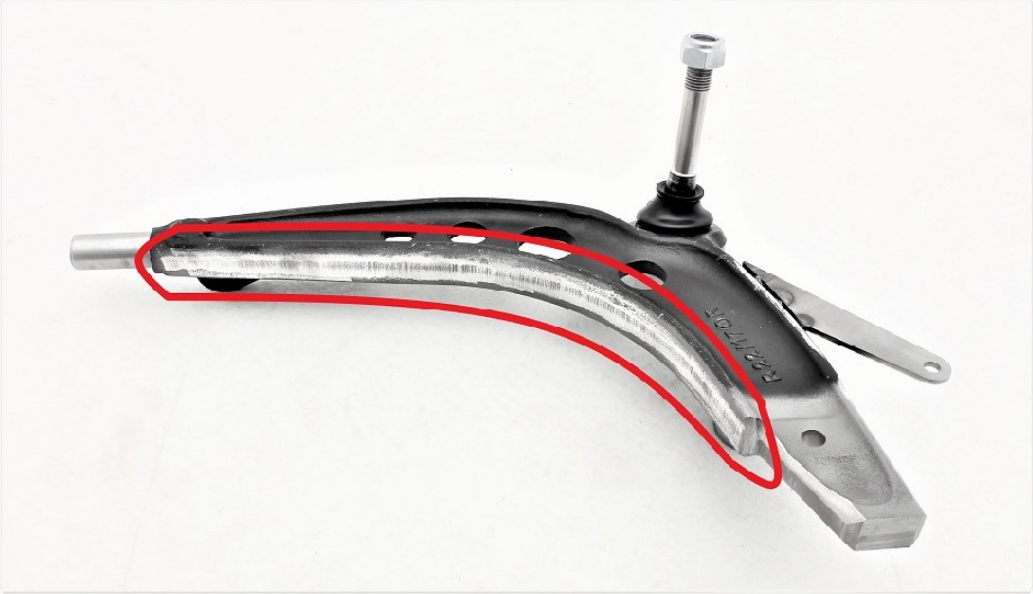
12. Check fitment of the control arm extension. Use the welding jig to check fitment.

13. On some control arms, the forging marks on the outside of the arm may need to be ground flat.



14. Bevel the edges for welding.

15. Clean the highlighted area from paint/rust.



16. Install spacers as shown in the picture.

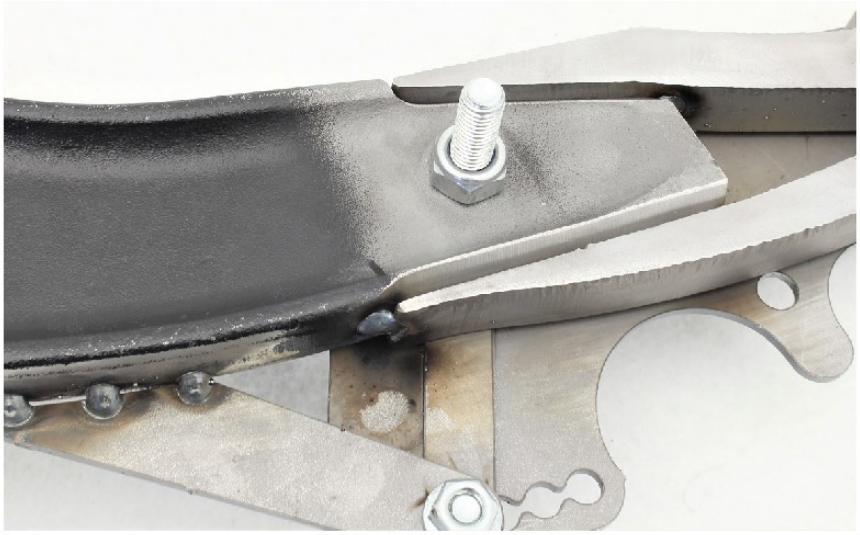
17. Install the welding jig as shown in the picture. Use 2pcs M10x55 bolts and 1pc M8 bolt. Use the slot that corresponds to your chosen control arm length. 60mm length shown.

18. Tighten all bolts finger-tight and check fitment of the spherical housing. Fit the housing so that the circlip groove is at the top. Spherical housing should sit at a 10º angle. 8 to 12 degrees is ok.

19. Make sure the spherical housing is touching or is very close to the upper part of the jig. The chamfered edge should protrude from the jig.

20. Make sure the extension is parallel to the control arm. Due to different control arm manufacturers and different model years, control arm shapes can be slightly different and the extension position might need changing accordingly.

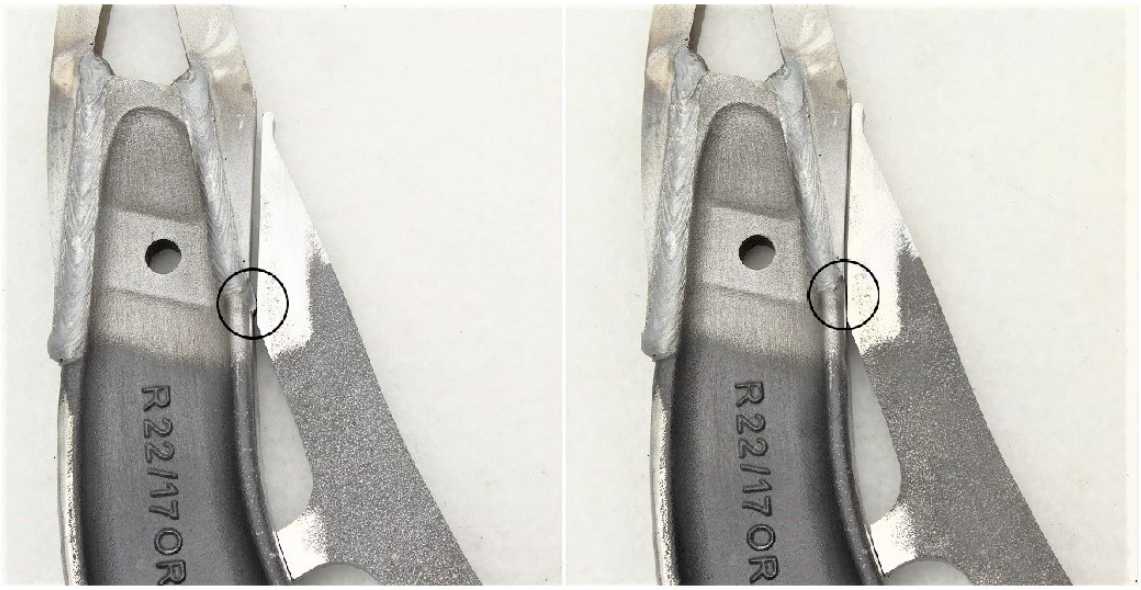
21. Tack weld the extension to the control arm and spherical housing to the extension. Recommended points for tack welding are shown in these pictures.



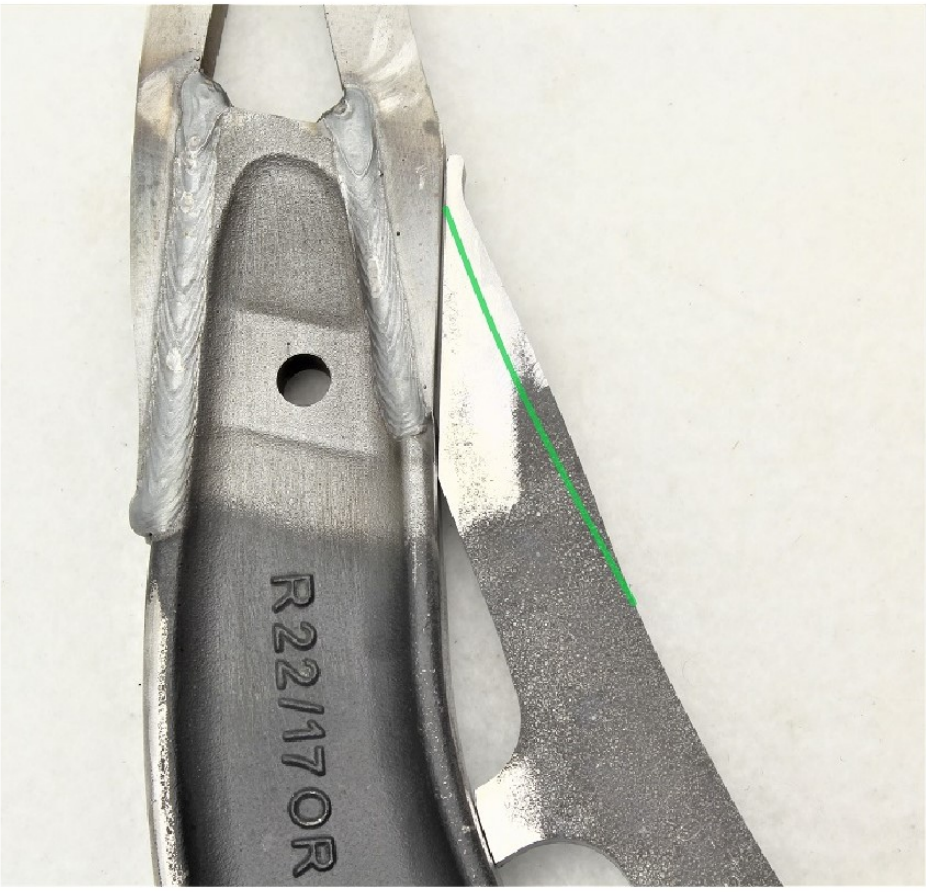
22. Keep the jig in place and fully weld the control arm from one side.
Do not overheat the control arm or the inner ball joint will become damaged. We recommend letting the control arm cool to room temperature before continuing.

23. Remove the jig and the welded tab and fully weld the control arm.

24. Check fitment of the reinforcement rib. If necessary, grind off the weld so that the rib sits as close to the control arm as possible.



25. If making control arms shorter than 60mm, the reinforcement rib must be modified similar to this picture.



26. Make sure the rear end of the reinforcement rib sits flush with the control arm as shown in the picture. If not, grind some material off the rib.

27. Make sure the rib is centered and parallel to the control arm. Tack weld the rib.

28. Fully weld the reinforcement rib. Don´t overheat the control arm or the ball joint will become damaged.

29. To install the control arm to E46, use the supplied hexagonal adapter. Fit the adapter so that one side of the adpater is parallel to the control arm/extension. Weld the adapter.

30. Paint the control arm to avoid corrosion.

31. Make sure the spherical housing and circlip groove are clean from any paint or welding spatter.

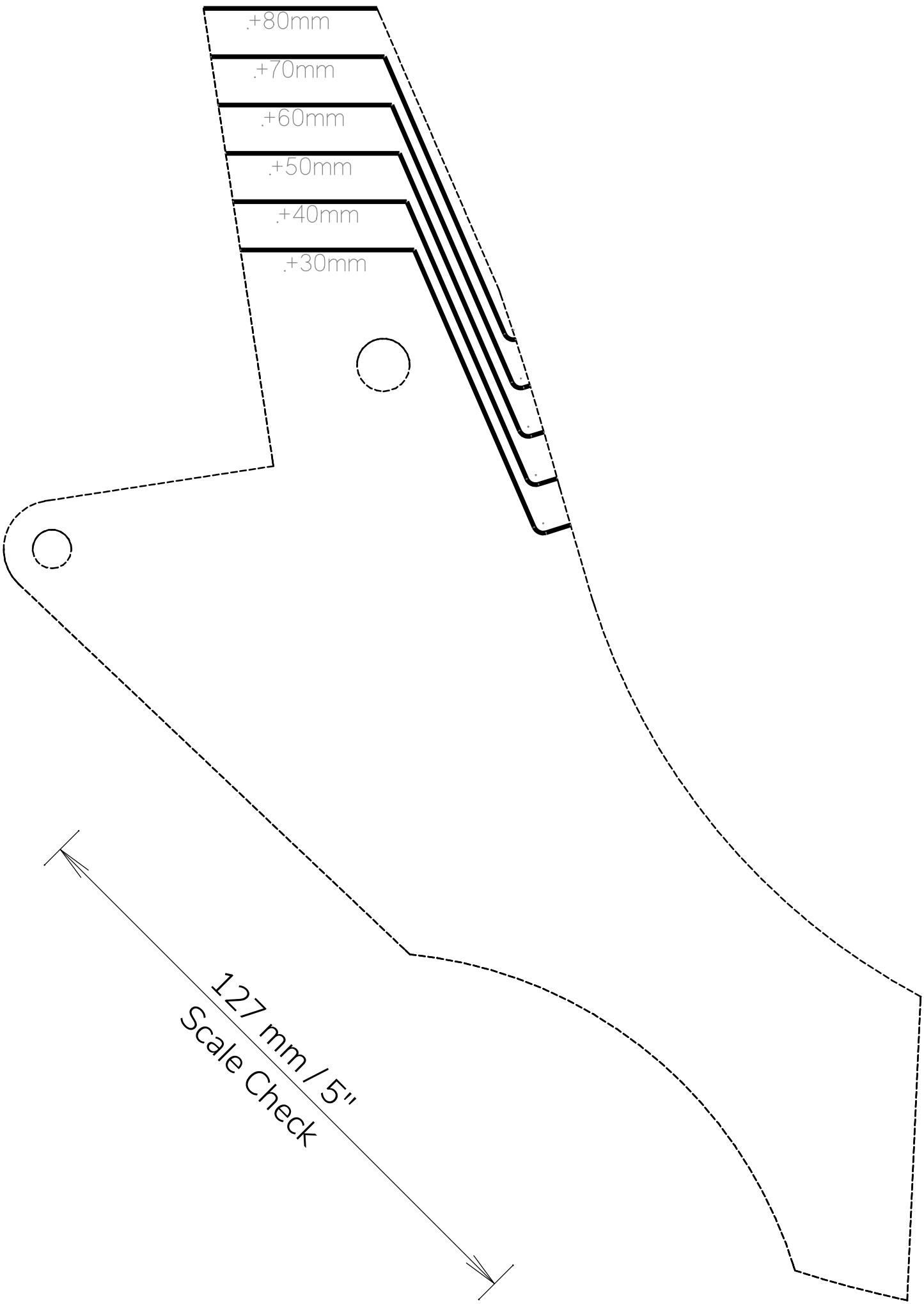
32. Press in the sperical bearing. Press only from the **outer race.** You can use 22-24mm, 7/8" or 15/16" socket to press the bearing in.
33. Fit the circlip.
34. Press in the spacers so that the stepped spacer is on top.

35. Install the lock stopper.

36. Before installing the rack extender spacer, clean the threads inside the rack. After cleaning use thread lock on the spacer. Hold the rack shaft end firmly in place while torquing the spacer.

37. For shorter than 50mm control arm length, the tie rod might need shortening. When assembling tie rods, make sure the inner tie rod has at least 13mm or 1/2 inch of thread engagement in the tie rod end.

38. Install the knuckle add-ons according to the BMW E30/E36/E46 Installation Guide.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.+70mm
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127 mm / 5"
Scale Check