Mini-Lathe

Angular Contact Bearing Change Guide

A picture story book to help you replace the factory fitted 6206-ZZ ball bearings with 7206B-2RS angular contact ball bearings on your SIEG Mini-Lathe.
This picture story guide is designed to help you remove the standard, factory fitted 6206-ZZ ball bearings from the C3 mini-lathe spindle and headstock and replace them with 7206B-2RS angular contact ball bearings.

Angular contact ball bearings are a better alternative for spindles since they are specifically designed to accept a pre-load, resulting in greater spindle accuracy. They also have rubber seals (2RS), ensuring improved protection against contamination, when compared with open or metal shielded bearings.

1. The C3 Head assembly already removed from the machine.
2. Remove the lock nuts from the spindle.
3. Lock nuts, gear, key and spacer removed.
4. Press out spindle.
5. Spindle removed.

This guide applies to C2, C2A and C3 mini-lathes. It can also be used for Super C2 and Super C3 mini-lathes and although these machines have a direct belt drive from motor to spindle and do not have a gearbox, the same principles apply. The story starts with the machine partly stripped down and only deals with the work required on the headstock. You may want to refer to our C3 Mini-Lathe Dismantling and Reassembly Guide for more information on the work required before and after the bearing change.

Since 7206B angular contact bearings are the same size as 6206-ZZ ball bearings, no machining is required for this bearing upgrade (unlike 30206 taper roller bearings which are wider). Although not expressly stated at each stage in this guide, every part is thoroughly cleaned in a paraffin type solvent before reassembly.

For lubrication, we recommend Molyslip MLG grease (ARC code: 170-100-10300), and a good quality lubricating oil such as Rock Oil HLP 32 Hydraulic Oil (ARC code: 170-150-00400). We do not recommend using automotive engine oil or 3-in-1 oil.
6. Remove spacer and key.
7. Press off bearing.
8. The disassembled spindle.
9. Drift out rear bearing.
10. Fit front bearing cover.
11. Fit 7206B angular contact bearing noting orientation.
13. Fit small spacer and key.
14. Align keyway in speed readout disc, spacer and gear and push spindle home.
15. Final press spindle assembly into head.

16. Fit large spacer to spindle.

17. Place 7206B bearing in position noting correct orientation.

18. Press bearing home.

19. Fit black metal spacer and key.

20. Fit metal gear.

21. Fit lock nuts, set bearing preload and lock the nuts.

Orient wide side of inner race to the outside.
22. Fit rear bearing cover.

23. Fit washer, key, drive pulley and circlip.

24. Lock front bearing cover in place.

25. Fit completed head assembly to lathe bed.