

New Spicer® NoSPIN® Differential Retro Fit Procedure

MODELS: S140 Model Drive Axle

Shown below is a set of instructions on how to properly install a NoSPIN® differential into a new Spicer® wheel differential assembly. It is important to follow the procedure to insure a proper repair.

Disassembly

1. With the carrier assembly removed from the drive axle housing, mount the carrier in a head stand if available.



2. Before we start to disassemble the carrier, we need to measure the ring gear backlash. We will be resetting the backlash to this setting when we reassemble the carrier.



3. Remove the carrier caps and fasteners. Remove the wheel diff and gear assembly.



4. We can now remove the ring gear from the diff case. Start by removing the ring gear bolt with an impact gun.

5. The ring gear is press fit to the diff case, so we need to use a press to separate them. Reinstall two of the ring gear bolts and turn until you get three to four threads engaged. Support the ring gear on two sides. Now press down on one of the bolts to move the case a small amount. Turn the assembly 180° and repeat the process.

Important Note: Do not press on the wheel diff shaft to separate these parts. Even a slight bend in the shafts will cause premature wear to the differential gearing.



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NoSPIN® Wheel Differential Assembly

1. Press a new plain half bearing cone on to the plain half diff case. Use an old bearing cup as a press tool.



2. Install the inner thrust washer. Apply oil to each side.



3. We can now install the NoSPIN assembly. Make sure the wing nut holding the NoSPIN together is facing up; this will make it easier to remove later in the procedure.



Important: Do not remove the wing nuts holding the NoSPIN together. It must be installed into the diff case fully compressed.

Caution: There are two springs in the NoSPIN assembly that are compressed and under pressure. Removing the NoSPIN restraining system before it's installed into the diff case may cause injury.



4. The differential top plate can now be installed over the NoSPIN. Remember the bolt holes are not symmetrical, so the plate only fits one way.



5. Lay the diff assembly on its side to install the new top plate bolts. This will keep the top plate in place until you get the bolts started by hand.



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NoSPIN® Wheel Differential Assembly (cont.)

6. With an impact gun, snug the bolts in a criss-cross pattern. We'll be torquing these bolts later in this procedure.



9. To make assembly easier, put the diff assembly in a press with the alignment dowels at 3:00 and 6:00 o'clock.



7. We can now install the two new alignment dowels. Use a press or hammer to fully seat them in the top plate.



10. The ring gear can now be lowered on to the diff with the dowel pins in alignment. Before we press the gear to the diff case, we want to start all the ring gear bolts by hand, engaging a couple of threads.



8. Install the thick thrust washer to the NoSPIN. Oil both sides.



11. Slowly press the gear in place. Having the ring gear bolts installed will guide the ring gear, keeping it from misaligning during the press.



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NoSPIN® Wheel Differential Assembly (cont.)

12. With the ring gear fully seated to the diff case, we can snug the ring gear bolts with an impact gun in a crisscross pattern.



15. The last step is to remove the wing nuts that were holding the NoSPIN together. Remove the threaded rod and washers.



13. With the assembly still in the press, apply enough load so the assembly won't turn while torquing the ring gear bolt. In a crisscross pattern, torque to 435-465 ft. lbs. (589-630 Nm).

14. Now turn the assembly over in the press so we can torque the plain half case bolts. Again, apply enough pressure to keep the diff from rotating while torquing the bolts to 180-220 ft. lbs (242-298 Nm).

16. For complete instructions for the rest of the carrier reassembly, go to Media.SpicerParts.com and search for service manual AXSM-0030.

All applications must be approved by the Application Engineering Department. Specifications and/or design are subject to change without notice or obligation.

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