



GrimmSpeed Subaru Crank Pulley

Installation Instructions

Manual 300024 RevA



All GrimmSpeed products are intended for Off-Road use only.

Installation

1. Remove air intake duct with a flat blade screwdriver.



2. Using a 10mm wrench, remove the accessory belt guard. Once the bolt and nut is removed, you can unsnap it. Gently unsnap the 2 snap locations independently and do not pry from just one side. If not careful, it can crack.



3. Using a 12mm socket, loosen the alternator tension lock bolt.



4. Then loosen the tensioning rod with a 12mm socket.



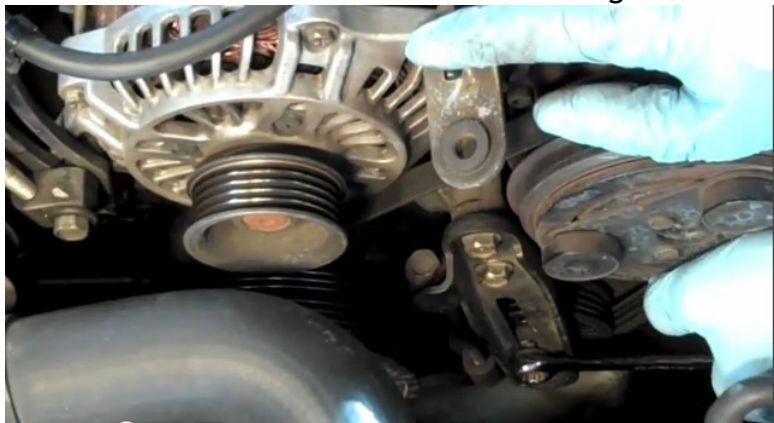
5. You will then need to loosen the right alternator tension bolt with a 12mm socket.



6. Press down on the alternator to relieve the belt tension and remove the belt.



7. Removal of A/C belt for pre-2008 models. 2008+ owners please skip to install step 9. Loosen the A/C idler tension lock nut using a 12mm wrench.



8. Loosen the tensioning rod with a 12mm socket and remove the belt.



9. **Removal of A/C belt for 2008+ models. Pre-2008 owners please skip to install step 14.** Because your car does not have a belt tension idler for the A/C compressor, you will need to rotate the engine and feed the belt off of the A/C compressor pulley. Set the parking brake on your car and place the car in neutral. Using a 22mm socket and 1/2" drive ratchet rotate the engine in a clockwise direction.



10. While you are rotating the engine by hand, pull on the belt with light tension 2-3" before it contacts the A/C compressor pulley. You will need to rotate the engine 1-2 full revolutions before the belt is fed off.



11. You will now be removing your OEM crank pulley. If your crank pulley looks like this, you will install the 4 larger pins into the GrimmSpeed crank pulley removal tool using a 10mm hex wrench.



12. If your OEM pulley looks like this, you will install the 4 smaller pins into the GrimmSpeed crank pulley removal tool using an 11mm wrench.



13. Insert a 1/2" drive ratchet or breaker bar into the GrimmSpeed crank pulley removal tool and insert the tool into your OEM crank pulley.



14. Insert a 22mm socket (we've found a deep socket works the best) into the crank pulley bolt. Then insert a breaker bar onto the socket. You will be rotating the crank pulley bolt counter clockwise. Hold the pulley from rotating with the ratchet that is installed on the GrimmSpeed crank pulley removal tool. Loosen the bolt and remove it.



15. Rock the OEM pulley back and forth and pull it out from the engine. Be sure to clean the end of the crank shaft to remove any dirt or debris.



16. You will now be installing the GrimmSpeed crank pulley. Place 3 black nylon washers onto the face of the pulley to protect the finish from the removal tool.



17. Install GrimmSpeed pulley tool and fasten using the 3 supplied fasteners with a 10mm hex wrench.



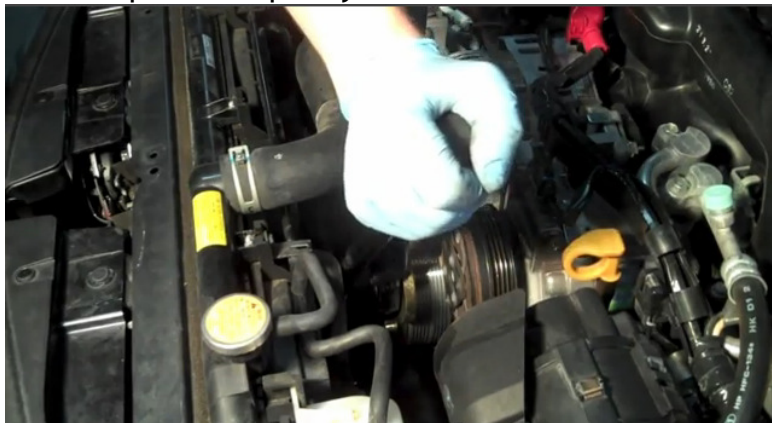
18. Install crank pulley onto crankshaft. **WARNING:** Be sure to line up the keyway and ensure the pulley is fully seated onto the crankshaft. If you do not, damage can occur to your pulley or crankshaft.



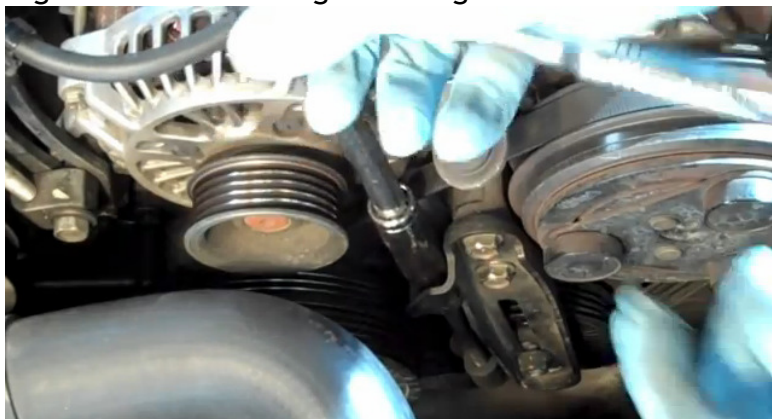
19. Set your torque wrench to 94ft lbs.



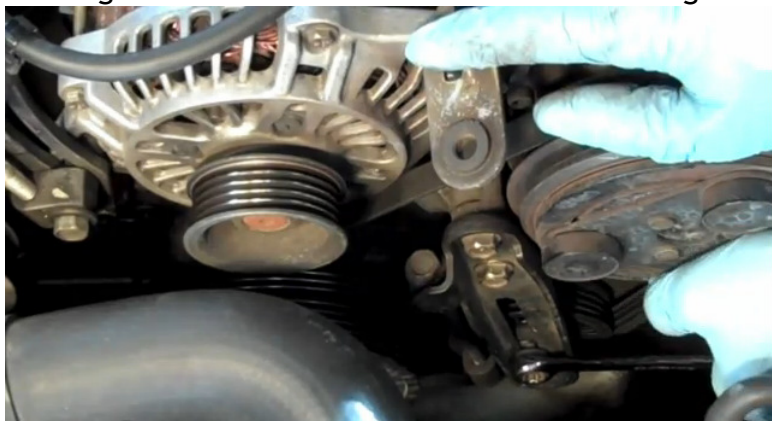
20. Torque crank pulley belt to 94 ft. lbs.



21. Installation of A/C belt for pre-2008 models. 2008+ owners please skip to install step 23. Inspect old belt and replace if worn. Install belt onto crank pulley and A/C pulley. Tighten the tensioning rod using a 12mm socket to the OEM spec.



22. Tighten the A/C idler tension lock nut using a 12mm wrench.



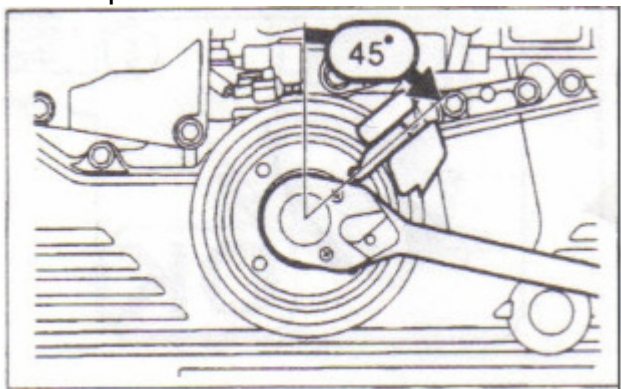
23. Installation of A/C belt for 2008+ models. Pre-2008 owners please skip to install step 34. Your car does not have an A/C tension idler and utilizes a stretch fit belt. You will need the GrimmSpeed light weight pulley stretch tool along with the Gates stretch tool to install this belt. Install the provided nylon washers onto the pulley to protect the finish. Note: Pulley is shown outside of the car for clarification purposes.



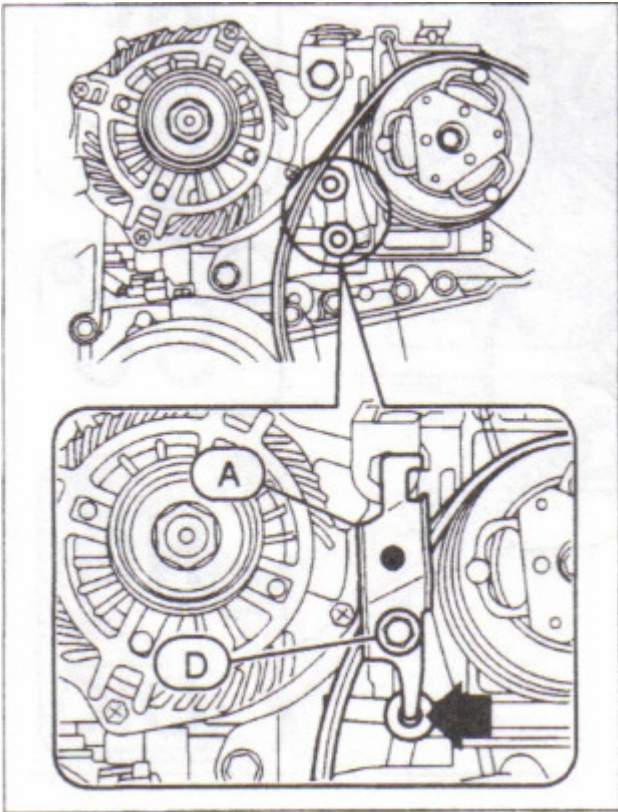
24. Tighten the GrimmSpeed light weight pulley stretch tool onto the pulley as shown with the Gates plastic belt ramp. You will use an 8mm hex wrench.



25. Rotate the pulley clockwise so that the tool is approximately 45degrees from the 12 o'clock position.



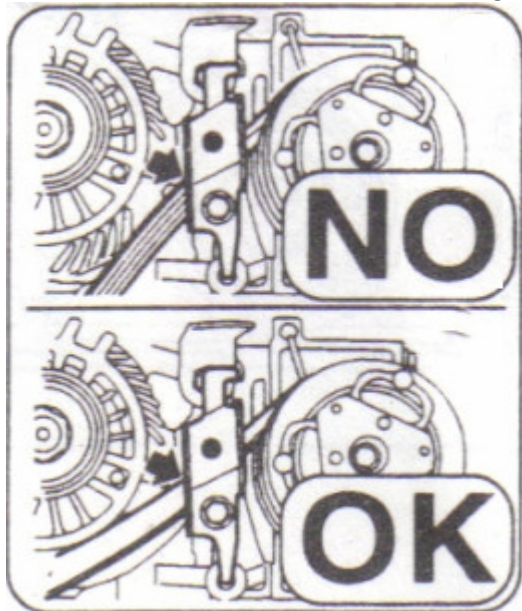
26. Install the belt onto the A/C compressor pulley. Attach the metal bracket as shown using supplied bolt. The belt will be behind the bracket. The bracket's tang will rest into the unthreaded lower hole.



27. Loop the belt around the crank pulley tool as shown.



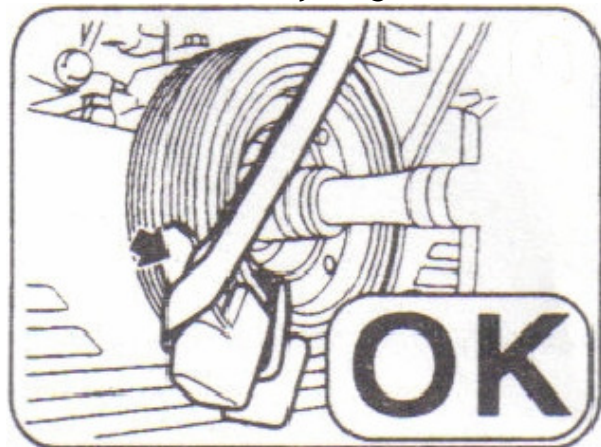
28. Ensure the belt ribs are facing backwards like the image below.



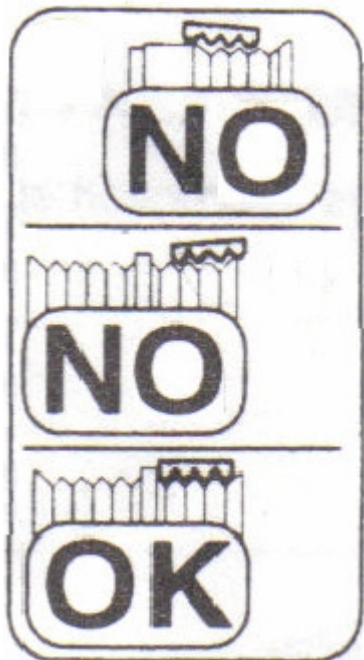
29. Using a 22mm socket, rotate the engine over to feed the belt onto the pulley.



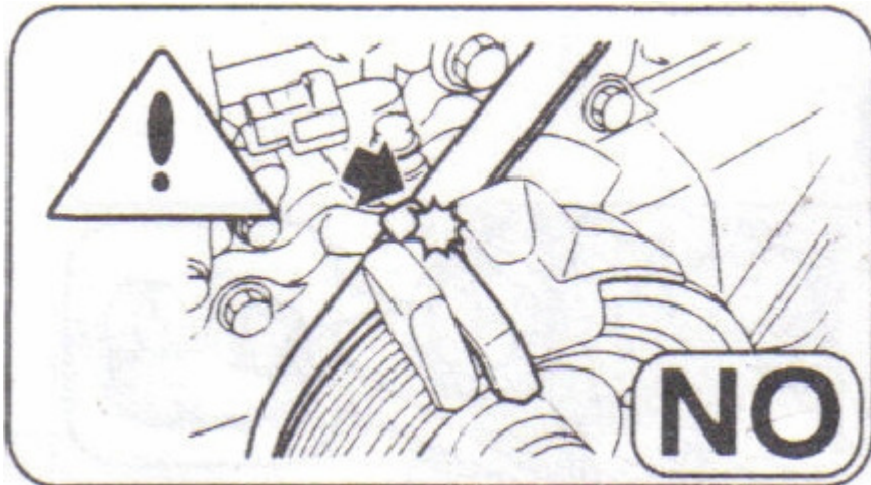
30. Continue rotating the engine to fully place the belt into position. Be careful to not let the belt catch on anything.



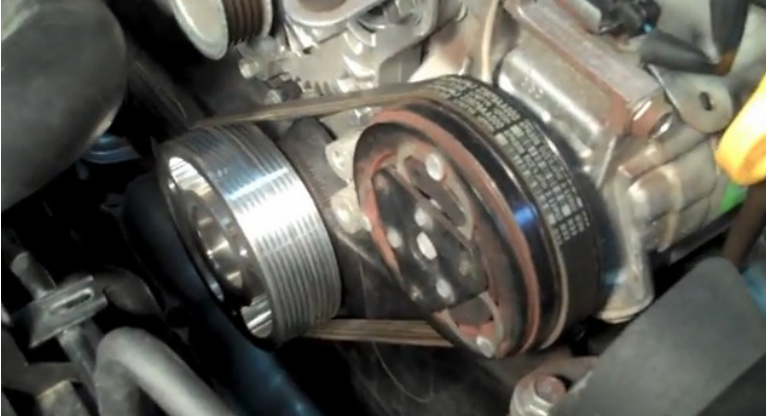
31. Ensure the belt is properly seated in all the grooves.



32. Warning: Do not rotate the crank tool past the belt. This can damage the tool and the belt. Remove the tool when you get to this point.



33. Before starting the engine, rotate the crankshaft 2X in the clockwise direction to ensure the belt is properly seated and installed.



34. Install power steering/alternator belt and tighten the tensioner rod using a 12mm socket.



35. Tighten the tensioner lock bolt and the right alternator pivot bolt. Be sure to align the bracket to allow for easy belt cover installation.



36. Install belt cover and install bolt and nut with a 10mm socket.



37. Install inlet air duct by reusing the supplied clips. Start engine and verify there the correct belt tension. Congrats, you are done!



Please contact us if you have any questions during installation. 612.379.0000 or sales@grimmspeed.com. AIM: GrimmSpd / MSN: grimmspeed@hotmail.com
Thank you for your purchase!

GRIMMSPEED